Pioneer *sound.vision.soul*

AUDIO/VIDEO MULTI-CHANNEL RECEIVER

VSX-C402

Operating Instructions

IMPORTANT

The lightning flash with arrowhead symbol, within an equilateral triangle, is intended to alert the user to the presence of uninsulated "dangerous voltage" within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.

CAUTION
RISK OF ELECTRIC SHOCK
DO NOT OPEN

CAUTION:
TO PREVENT THE RISK OF ELECTRIC SHOCK, DO NOT REMOVE COVER (OR BACK). NO USER-SERVICEABLE PARTS INSIDE. REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.

The exclamation point within an equilateral triangle is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.

D3-4-2-1-1_En

Replacement and mounting of an AC plug on the power supply cord of this unit should be performed only by qualified service personnel.

IMPORTANT

FOR USE IN THE UNITED KINGDOM

The wires in this mains lead are coloured in accordance with the following code:

Blue : Neutral
Brown : Live

If the plug provided is unsuitable for your socket outlets, the plug must be cut off and a suitable plug fitted.

The cut-off plug should be disposed of and must not be inserted into any 13 amp socket as this can result in electric shock. The plug or adaptor or the distribution panel should be provided with 5 A fuse. As the colours of the wires in the mains lead of this appliance may not correspond with coloured markings identifying the terminals in your plug, proceed as follows ;
The wire which is coloured blue must be connected to the terminal which is marked with the letter N or coloured black.
The wire which is coloured brown must be connected to the terminal which is marked with the letter L or coloured red.

Do not connect either wire to the earth terminal of a three pin plug.

NOTE
After replacing or changing a fuse, the fuse cover in the plug must be replaced with a fuse cover which corresponds to the colour of the insert in the base of the plug or the word that is embossed on the base of the plug, and the appliance must not be used without a fuse cover. If lost replacement fuse covers can be obtained from your dealer.
Only 5 A fuses approved by B.S.I or A.S.T.A to B.S.1362 should be used.

D3-4-2-1-2-2_En

Thank you for buying this Pioneer product.
Please read through these operating instructions so you will know how to operate your model properly. After you have finished reading the instructions, put them away in a safe place for future reference.
In some countries or regions, the shape of the power plug may sometimes differ from that shown in the explanatory drawings. However, the method of connecting and operating the unit is the same.

This product complies with the Low Voltage Directive (73/23/EEC, amended by 93/68/EEC), EMC Directives (89/336/EEC, amended by 92/31/EEC and 93/68/EEC). D3-4-2-1-9a_En

WARNING:
BEFORE PLUGGING IN THE UNIT FOR THE FIRST TIME, READ THE FOLLOWING SECTION CAREFULLY. The voltage of the available power supply differs according to country or region. Be sure that the power supply voltage of the area where this unit will be used meets the required voltage (e.g., 230V or 120V) written on the rear panel. D3-4-2-1-4_En

WARNING: No naked flame sources, such as lighted candle, should be placed on the apparatus. If naked flame sources accidentally fall down, fire spread over the apparatus then may cause fire.

D3-4-2-1-7a_En

VENTILATION: When installing this unit, make sure to leave space around the unit for ventilation to improve heat radiation (at least 20 cm at top, 50 cm at rear, and 10 cm at each side).
WARNING: Slot and openings in the cabinet are provided for ventilation and to ensure reliable operation of the product and to protect it from overheating, to prevent fire hazard, the openings should never be blocked and covered with items, such as newspapers, table-cloths, curtains, etc. Also do not put the apparatus on the thick carpet, bed, sofa, or fabric having a thick pile. D3-4-2-1-7b_En

WARNING: The apparatus is not waterproofs, to prevent fire or shocks hazard, do not expose this apparatus to rain or moisture and do not put any water source near this apparatus, such as vase, flower pot, cosmetics container and medicine bottle etc. D3-4-2-1-3_En

The STANDBY/ON switch is secondary connected and therefore, does not separate the unit from mains power in STANDBY position. Therefore install the unit suitable places easy to disconnect the MAINS plug in case of the accident. The MAINS plug of unit should be unplugged from the wall socket when left unused for a long period of time. D3-4-2-2-2a_En

CAUTION
The POWER switch does not completely separates the unit from the MAINS in off position. Therefore install the unit suitable places easy to disconnect the MAINS plug in case of the accident. The MAINS plug of unit should be unplugged from the wall socket when left unused for a long period of time.

D3-4-2-2-2b_En

This product is for general household purposes. Any failure due to use for other than household purposes (such as long-term use for business purposes in a restaurant or use in a car or ship) and which requires repair will be charged for even during the warranty period.

K041_En

Operating Environment

Operating environment temperature and humidity:
+5 °C – +35 °C (+41 °F – +95 °F); less than 85 %RH
(cooling vents not blocked)
Do not install in the following locations

- Location exposed to direct sunlight or strong artificial light
- Location exposed to high humidity, or poorly ventilated location

D3-4-2-1-7c_En

Before you start

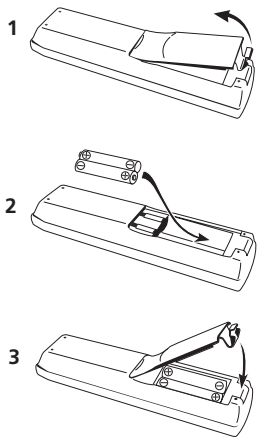
Checking the supplied accessories

Please check that you've received the following supplied accessories:

- AM loop antenna
- FM wire antenna
- Power cable
- Dry cell batteries (AA Size / IEC R6P) x2
- Remote control unit
- Operating instructions
- Speaker cable labels
- Warranty card

Loading the batteries

The remote control operates on two AA batteries (supplied).

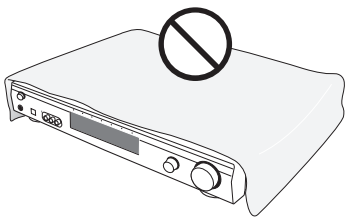


Caution

- Incorrect use of batteries may result in such hazards as leakage and bursting. Observe the following precautions:
- Never use new and old batteries together.
- Insert the plus and minus sides of the batteries properly according to the marks in the battery case.
- Batteries of the same shape may have different voltages. Do not use different batteries together.
- When disposing of used batteries, please comply with governmental regulations or environmental public institution's rules that apply in your country or area.

Ventilation

- When installing this unit, make sure to leave space around the unit for ventilation to improve heat dispersal (at least 20 cm at the top, 50 cm at the rear, and 10 cm at each side). If not enough space is provided between the unit and walls or other equipment, heat will build up inside, interfering with performance and/or causing malfunctions. See below for exceptions to this.
- Don't place anything on top of the receiver except for a Pioneer DV-464, 360, 454, 350, 444, 474 or 545 DVD player. If you do place one of these pieces of equipment on top of the receiver be sure to leave the ventilation space over it as prescribed above.
- If using a rack to hold the receiver make sure the back of the rack and the left side are open.
- Also, if you're using a case with doors, leave the doors open when using the receiver.
- Do not place on a thick carpet, bed, sofa or fabric having a thick pile. Do not cover the receiver with fabric or other covering. Anything that blocks ventilation will cause the internal temperature to rise, which may lead to breakdown or fire hazard.



- The receiver may become hot while in use, please take care around it.

Maintenance of external surfaces

- Use a polishing cloth or dry cloth to wipe off dust and dirt.
- When the surfaces are dirty, wipe with a soft cloth dipped in some neutral cleanser diluted five or six times with water, and wrung out well, and then wipe again with a dry cloth. Do not use furniture wax or cleansers.
- Never use thinners, benzine, insecticide sprays or other chemicals on or near this unit, since these will corrode the surfaces.

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English

Chapter 1
Quick start guide

Introduction

This 'Quick start guide' shows you how to connect your speakers, TV and DVD player to this receiver, and also takes you through switching on and playing a DVD disc.

Easy Setup

This section shows you how to connect your speakers, subwoofer, DVD player and TV to this receiver so you can start enjoying home cinema sound right away.

Before you start, make sure everything you're connecting is switched off and unplugged.

Connecting speakers

This receiver has speaker terminals for front left and right speakers (**L** and **R** in the diagram), a center speaker (**C**) and two surround speakers (**RS** and **LS**). The minimum speaker configuration is just the front left/right speakers, but we recommend connecting all five if possible. Note that surround speakers should always be connected as a pair; do not connect just one surround speaker. All the speakers you use should have a nominal impedance between 6–16Ω.

1 Connect your speakers to the receiver, as shown in the diagram below.

Prepare the speaker cable by stripping about 1 cm of the plastic shielding from each speaker wire.

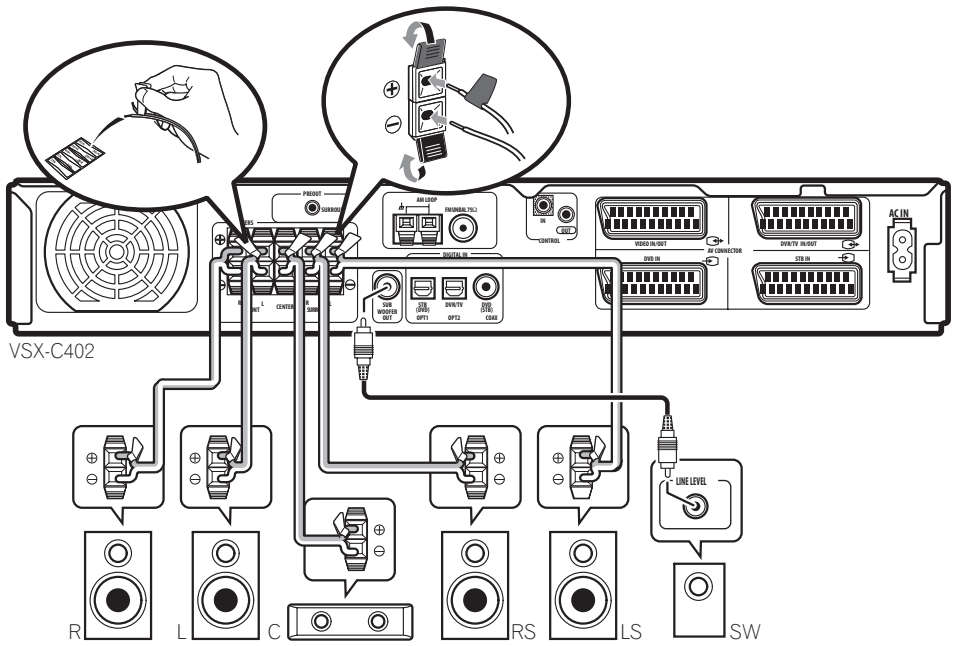
Connect the front speakers to the **FRONT L/R** terminals; the center speaker to the **CENTER** terminal; and the surround speakers to the **SURROUND L/R** terminals.

Press on a tab to open a terminal; insert the exposed wire, then release the tab to secure.

For correct sound it's important that the positive and negative terminals of the receiver and each speaker are matched. To help you do this, attach the supplied colored self-adhesive labels to one half of each speaker cable.

2 Connect a powered subwoofer to the SUBWOOFER OUT jack, as shown in the diagram below.

Use a standard audio cable with RCA/phono plugs.



Note

- For XW-HTD525 wireless speaker system only: The **SURROUND PREOUT** terminal is intended for use with a wireless speaker system. See your wireless speaker manual for more details on connecting up.

Connecting your TV and DVD player

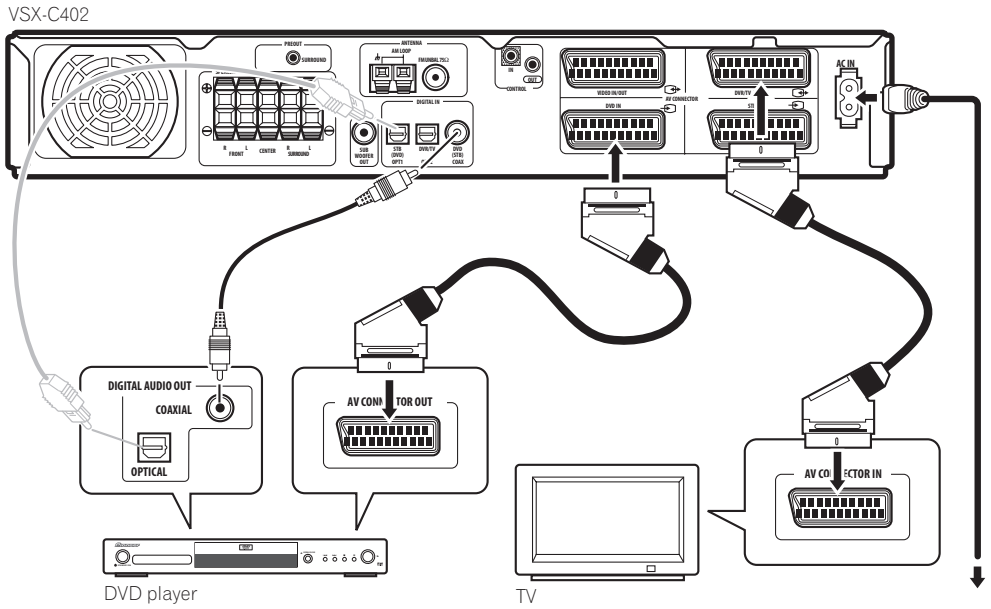
1 Connect your DVD player to the receiver.
Connect a 21-pin SCART cable (not supplied) between the AV output of your DVD player and the **DVD IN** AV connector of this receiver for the video and analog audio. (See *Specifications* on page 44 for the pin assignment.)

For digital audio, connect a coaxial digital audio cable (not supplied) between your DVD player's coaxial digital output and the **DVD(STB) COAX** jack on this receiver.

- If your DVD player doesn't have a coaxial digital out you can use an optical cable connected between the optical output jack on your DVD player and the **STB(DVD) OPT1** jack on this receiver. However, you will have to reassign the input to DVD before using for the first time. See *Optical input setting* on page 33 for how to do this.
- If you connect an optical digital cable, be careful when inserting the plug not to damage the shutter protecting the optical socket.

2 Connect your TV to the receiver.
Use a 21-pin SCART cable (not supplied) to connect the **DVR/TV IN/OUT** AV connector on this receiver to a SCART input on your TV.

3 Connect the supplied AC power cable to the AC IN on this receiver and plug in the other end to a power outlet.



Switching on and playing a DVD

Once you switch the receiver on it will automatically detect the speakers you have connected. Although there are a number of more detailed settings you can make to optimize the surround sound, you should be able to get acceptable surround sound performance right away.

1 Switch on your TV, powered subwoofer.
Also make sure that your TV is set to the AV input you connected the receiver to.

2 Press ⏻ RECEIVER on the remote or ⏻ STANDBY/ON on the front panel to switch on the receiver.

3 Press DVD on the remote or turn the INPUT SELECTOR knob on the front panel to select the DVD input.

4 Switch on your DVD player.

5 Load a DVD and start playback.
This receiver will automatically decode Dolby Digital, DTS, or Dolby Surround DVD-Video discs, according to your speaker setup. In most cases, you won't have to make changes for realistic surround sound.

Other possibilities (like listening to a CD with multichannel surround sound) are explained in *Home theater sound* on page 24.

6 Use the MASTER VOLUME control (front panel or remote) to adjust the volume.

- Turn down your TV's volume so that you only hear sound from this system.

English

Chapter 2
Introductory information

Introduction to home theater

You are probably used to using stereo equipment to listen to music, but may not be used to home theater systems that give you many more options (such as surround sound) when listening to soundtracks.

Home theater refers to the use of multiple audio tracks to create a surround sound effect, making you feel like you're in the middle of the action or concert. The surround sound you get from a home theater system depends not only on the speakers you have set up in your room, but also on the source and the sound settings of the receiver.

DVD-Video has become the basic source material for home theater due to its size, quality, and ease of use. The true multichannel audio possible using DVD is what creates a convincing surround sound effect and gives you the feeling of 'being there'.

Features

Dolby Digital and DTS decoding (page 24)
Dolby Digital and DTS decoding brings theater sound right into your home with up to six channels of surround sound, including a special LFE (Low Frequency Effects) channel for deep, realistic sound effects.

Dolby Pro Logic II decoder (page 24)
The built-in Dolby Pro Logic II decoder not only provides full surround sound decoding for Dolby Surround sources, but will also generate convincing surround sound for any stereo source.

Surround and Advanced Surround modes (page 25)
Used together with the Dolby Digital, DTS or Dolby Pro Logic II modes, the Surround and Advanced Surround modes are designed to enhance particular types of program material by, for example, reproducing the acoustic space of a concert hall for music-based material.

Dialog Enhancement (page 25)
Use the Dialog Enhancement feature to accentuate dialog and vocals in a program source and match the vertical placement of the center channel with the front left/right channels.

Virtual Surround Back mode (page 25)
The Virtual Surround Back mode creates the illusion of a surround back channel—an extra channel located directly behind the listener—for added surround realism.

Sound Modes (page 25)
The Sound Modes offer useful effects for a number of situations. For example, Midnight mode is useful when you need to listen at low volume but still want effective surround sound.

Easy-to-use remote control
The remote control gives you not only complete control over every function of this receiver, but also over other components in your home theater system. Using a system of preset codes, you can program the remote to operate a wide range of other equipment.

Easy setup
Setting up for home theater sound is as easy as connecting your speakers, a DVD player or other source, and your TV. The Room Setup feature is a very quick and simple way to enhance performance, while for complete surround sound control you still have access to the full range of surround sound settings.

The Energy-saving Design
This unit is designed to use less than 0.4 W of energy when the receiver is in standby mode.

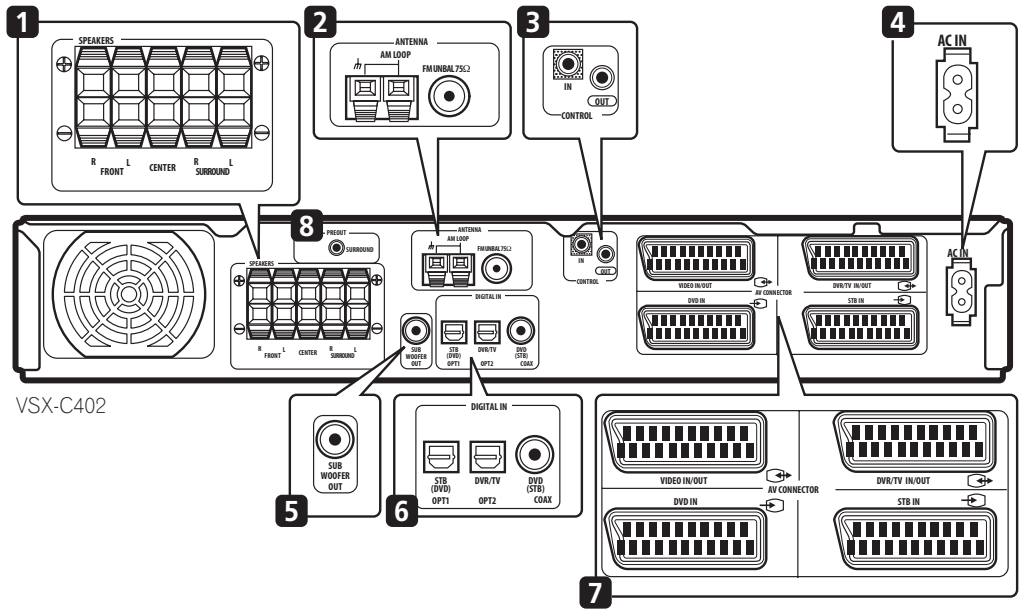
Manufactured under license from Dolby Laboratories. "Dolby", "Pro Logic", and the double-D symbol are trademarks of Dolby Laboratories.

"DTS" and "DTS Digital Surround" are trademarks of Digital Theater Systems, Inc.

Chapter 3

Connecting your equipment

Rear panel



VSX-C402

Important

- Before making or changing the connections, switch off the power and disconnect the power cable from the power outlet.

1 SPEAKERS terminals (page 13)
FRONT L/R, **CENTER** and **SURROUND L/R** speaker terminals.

2 Antenna connections

AM LOOP (page 15)
Connect the supplied AM loop antenna or an outdoor antenna if reception is bad.

FM UNBAL 75Ω antenna terminal (page 15)
Connect the supplied FM wire or an outdoor antenna if reception is bad.

3 CONTROL IN jack / CONTROL OUT jack (page 16)
Use to connect to other Pioneer components.

4 AC IN (page 17)
Connect the supplied AC power cable.

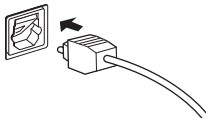
5 SUBWOOFER OUT jack (page 13)
Connect a powered (active) subwoofer.

6 Digital connections
The three digital audio jacks are all inputs. Connect to the digital outputs of digital source components such as DVD and CD players, satellite receivers, etc.

STB(DVD) OPT1 jack (page 11)
Optical digital audio jack for the **STB** input (although it is possible to reassign it to the **DVD** input).

DVR/TV OPT2 jack (page 12)
Optical digital audio jack for the **DVR/TV** input.

- When connecting optical cables, be careful when inserting the plug not to damage the shutter protecting the optical socket.



- When storing optical cable, coil loosely. The cable may be damaged if bent around sharp corners.

DVD(STB) COAX jack (page 10)
Coaxial digital audio jack for the **DVD** input (although it is possible to reassign it to the **STB** input).

7 SCART AV connectors
The four SCART-type AV connectors carry video and analog audio.

VIDEO IN/OUT AV connector (page 12)
AV connector for the **VIDEO** input. When the receiver is set to any other input, that signal is output from the **VIDEO IN/OUT** AV connector.

DVR/TV IN/OUT AV connector (page 10)
AV connector for the **DVR/TV** input. When the receiver is set to any other input, that signal is output from the **DVR/TV IN/OUT** AV connector.

DVD IN AV connector (page 10)
AV connector for the **DVD** input.

STB IN AV connector (page 11)
AV connector for the **STB** input.

The table below shows the input and output video formats available for each AV connector.

Connector	Input	Output
DVD	Composite, S-video, RGB	–
STB	Composite, S-video, RGB	–
VIDEO	Composite, S-video, RGB	Composite
DVR/TV	Composite	Composite, S-video, RGB

Note

- All AV connectors also have audio in. The **VIDEO** and **DVR/TV** connectors also have audio out.
- The **VIDEO** and **DVR/TV** connectors are compatible with i/o-Link.A, T-V Link, Easy Link, MegaLogic, SMARTLINK, Q-Link, DATALOGIC, NextTView Link, etc.

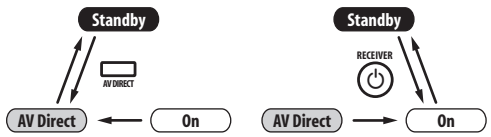
8 SURROUND PREOUT
For XW-HTD525 wireless speaker system only:
The **SURROUND PREOUT** terminal is intended for use with a wireless system. See your wireless speaker manual for more details on connecting up.

The AV Direct mode

The AV Direct mode allows the receiver to pass audio/video signals arriving at one of the AV connector inputs to the AV connector outputs without the sound being output through the speakers connected to the receiver. This allows you to operate your other components as if they were connected directly to each other without the receiver being on. One use for this is if you want to record from your satellite receiver to your VCR (both connected to this receiver) without the receiver being switched on. You could also use the AV Direct mode to watch a video, using your TV's speakers for the audio, without switching on the receiver.

You can switch into AV Direct mode (from either standby or on) using the **AV DIRECT** button on the remote control. However, it's also possible to set the receiver to switch the AV Direct function on automatically when an incoming signal is detected. See also *AV Direct setting* on page 34.

The diagram below shows how the **AV DIRECT** and the ⏻ **STANDBY/ON** buttons switch the receiver between standby, AV Direct mode, and on.

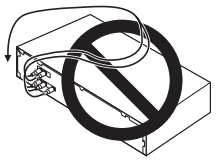


Installing the receiver

- When installing this unit, make sure to put it on a secure and level plane that is stable.
- Don't place it on the following places:
  – on a color TV (the screen may distort)
  – near a cassette deck (or close to a device that gives off a magnetic field). This may interfere with the sound.
  – in direct sunlight
  – in damp or wet areas
  – in extremely hot or cold areas
  – in places where there is a vibration or other movement
  – in places that are very dusty
  – in places that have hot fumes or oils (such as a kitchen)

When making cable connections

Be careful not to arrange cables in a manner that bends the cables over the top of this unit. If the cables are laid on top of the unit, the magnetic field produced by the transformers in this unit may cause a humming noise to come from the speakers.



Connecting a DVD player and TV

Follow the instructions below, referring to the diagram, to connect your DVD player and TV to the receiver.

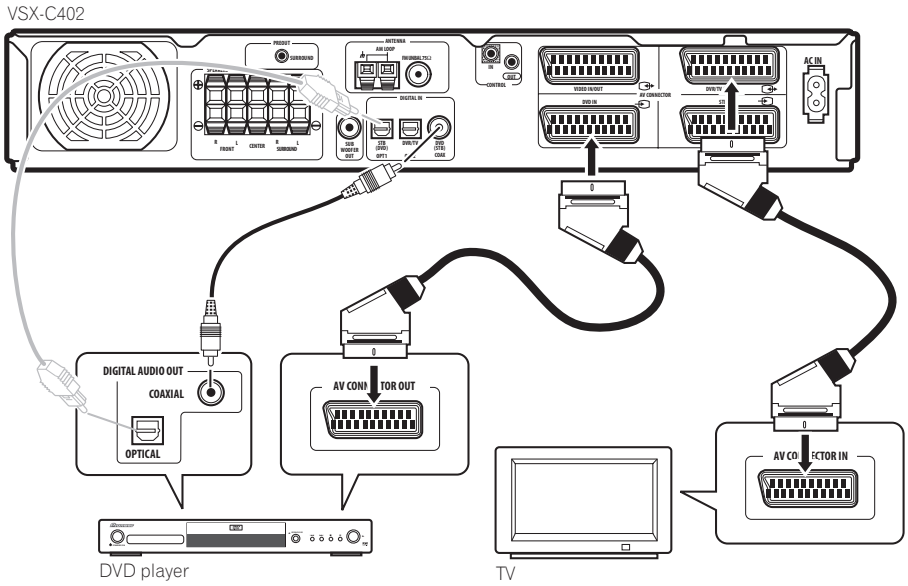
1 Use a SCART cable to connect the DVD IN AV connector to an AV connector on your DVD player.
This carries video and analog stereo audio signals from your DVD player to this receiver.

2 Use a coaxial digital audio cable to connect the DVD(STB) COAX jack to a coaxial digital audio output on your DVD player.
This connection carries stereo and multichannel digital audio.

If your DVD player doesn't have a coaxial digital audio out jack, it is possible to use an optical connection to the **STB(DVD) OPT1** jack. However, since by default this input is assigned to the **STB** input, you will need to reassign it to the **DVD** input before you can use it. After connecting up everything else see *Optical input setting* on page 33 for how to do this.

3 Use a SCART cable to connect the DVR/TV IN/OUT AV connector to an AV connector on your TV.
This connection carries video and analog stereo audio between this receiver and your TV.

- If you want to connect a digital video recorder between this receiver and your TV see *Connecting other video components* on page 12.
- If your TV has a built-in digital TV tuner, see also *Connecting a TV with a built-in digital TV tuner* below.



Connecting a TV with a built-in digital TV tuner

If your TV has a built-in digital TV tuner, you can connect the digital audio output to this receiver to enjoy Dolby Digital and DTS sound from digital TV broadcasts.

1 Complete step 3 in *Connecting a DVD player and TV* **above.**

2 Use an optical digital audio cable to connect the DVR/TV OPT2 jack to an optical digital audio output on your TV.

Connecting a satellite/cable receiver or other set-top box

Satellite and cable receivers, and terrestrial digital TV tuners are all examples of so-called 'set-top boxes'.

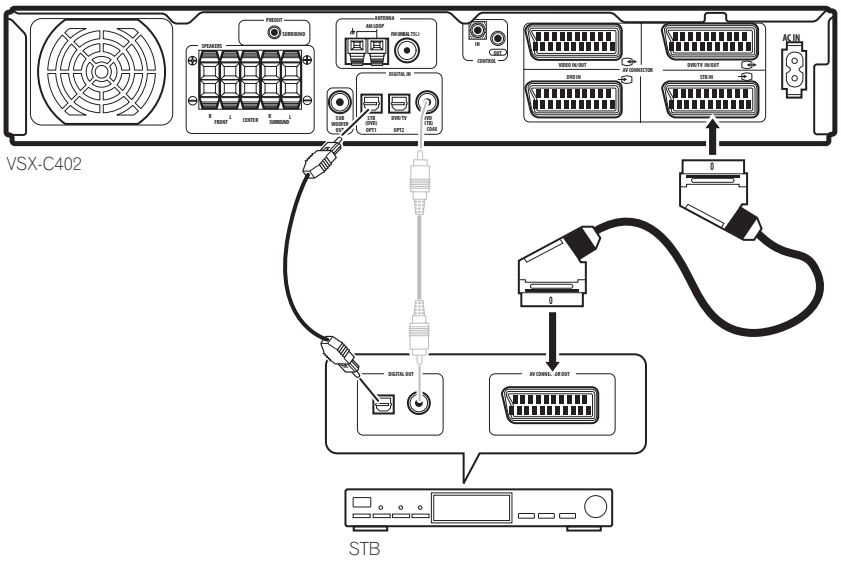
1 Use a SCART cable to connect the STB IN AV connector to an AV connector on the set-top box component.
This carries video and analog stereo audio signals from the set-top box component to this receiver.

2 Use an optical digital audio cable to connect the STB(DVD) OPT1 jack to an optical digital audio output on the set-top box component.
This connection carries stereo and multichannel digital audio.

If your set-top box component doesn't have an optical digital audio out jack, it is possible to use a coaxial connection to the **DVD(STB) COAX** jack. However, since by default this input is assigned to the **DVD** input, you will need to reassign it to the **STB** input before you can use it. After connecting up everything else see *Coaxial input setting* on page 33 for how to do this.

Note

- If your satellite/cable receiver doesn't have a digital audio output, omit step **2** above.



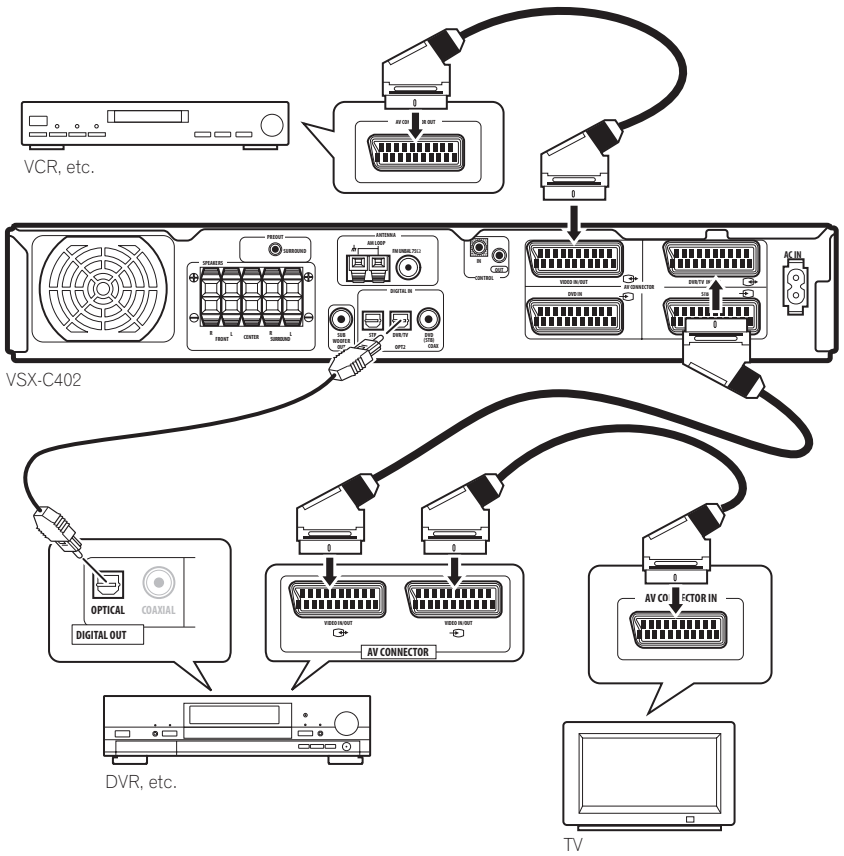
Connecting other video components

The **VIDEO IN/OUT** AV connector can be used for a VCR or other video player or recorder with analog audio. The **DVR/TV IN/OUT** AV connector and associated digital audio connection (the **DVR/TV OPT2** jack) can be used with digital video components, such as a DVD recorder, that can play digital soundtracks.

1 Use a SCART cable to connect the VIDEO IN/OUT AV connector to an AV connector on your VCR (or other video component).
This allows playback from and recording to the VCR (or other component).

2 Use a SCART cable to connect the DVR/TV IN/OUT AV connector to an AV connector on your DVD recorder (or other video component).
This allows playback from and recording to the DVR (or other component), including RGB video.

3 Use an optical digital audio cable to connect the DVR/TV OPT2 jack to an optical digital audio output on your DVD recorder (or other video component).
This connection carries stereo and multichannel digital audio.



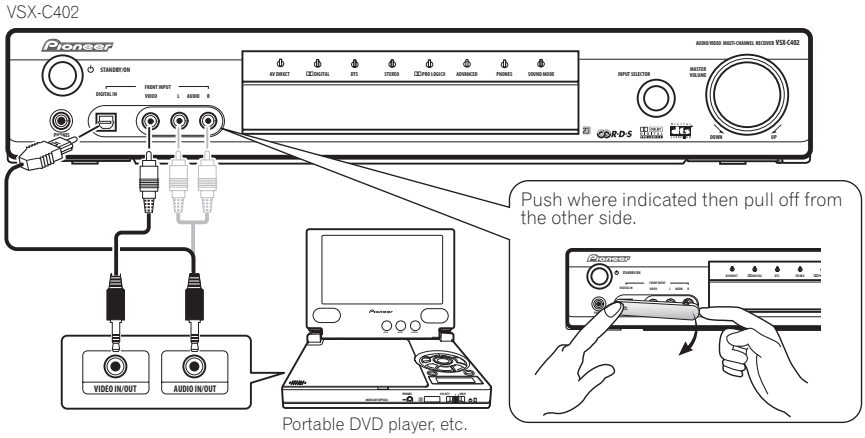
Note

- Some TVs have both RGB and i/o-Link.A compatible AV connectors, or a single AV connector is switchable. See the instructions that came with your TV for more details. This receiver is compatible with both formats without the need to switch.
- When the DVR is switched on, make sure that it is set to the correct input so that audio/video from the receiver gets passed through to the TV.
- When the receiver is unplugged or in standby (with AV Direct off), you may be able to hear distorted sound from the **VIDEO IN/OUT** AV connector and the **DVR/TV IN/OUT** AV connector if a connected component is playing.

Connecting equipment to the front panel inputs

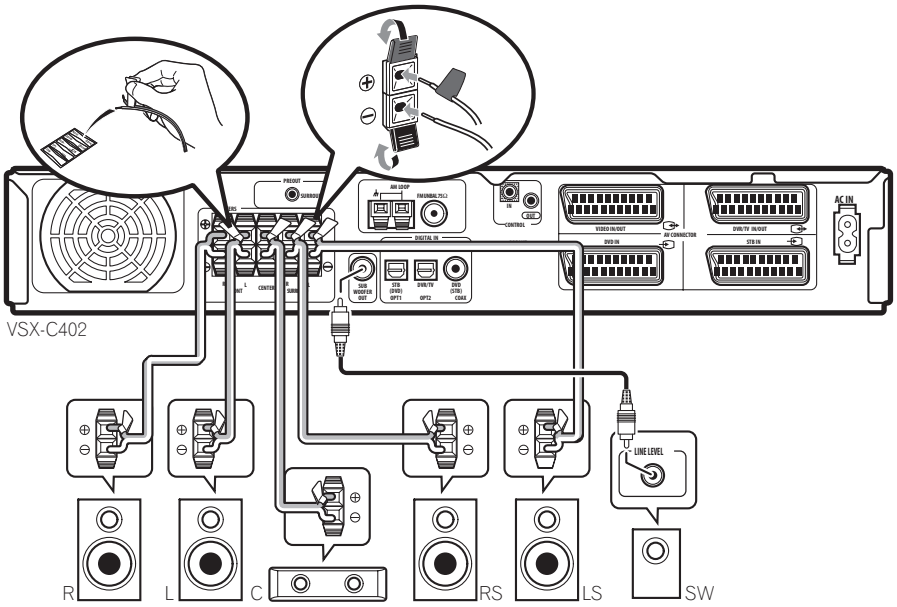
The **FRONT INPUT** jacks include a standard (composite) video jack (**VIDEO**), stereo analog audio inputs (**AUDIO L/R**) and an optical digital audio input (**DIGITAL**). You can use these connections for any kind of audio/video component, but they are especially convenient for portable equipment such as camcorders, video games and portable audio/video equipment.

- Remove the cover to access the front panel jacks. (See diagram below)
- The illustration below shows example connections to a portable DVD player.



Installing your speaker system

To take full advantage of the receiver's surround sound capabilities connect front, center and surround speakers, as well as a subwoofer. Although this is ideal, other configurations with fewer speakers—no subwoofer or no center speaker, or even no surround speakers—will work. At the very least, front left and right speakers only are necessary. Note that surround speakers should always be connected as a pair; do not connect just one surround speaker. All the speakers you use should have a nominal impedance between 6–16Ω.



Connecting the speakers

Before you can start connecting the speakers, make sure that the speaker cable you're going to use is properly prepared with about 10mm of insulator stripped from each wire, and the exposed wire strands twisted together.

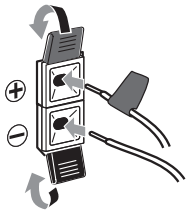
Each speaker connection on the receiver comprises a positive (+) colored, and negative (–) black terminal. For proper sound you should take care to match these up with the terminals on the speakers themselves. To assist you, use the supplied colored self-adhesive tags, affixing a tag to each end of one half of each cable. Use the tagged wire for the colored/positive terminal; use the untagged wire for the black/negative terminal. Use the different colors to help you identify which speaker cable attaches to which speaker.

Caution

- Make sure that all the bare speaker wire is twisted together and inserted fully into the speaker terminal. If any of the bare speaker wire touches the back panel it may cause the power to cut off as a safety measure.
- These speaker terminals can be under HAZARDOUS VOLTAGE. When you connect or disconnect the speaker cables, to prevent the risk of electric shock, do not touch uninsulated parts before disconnecting the power cord.

1 Connect the front left and right speakers to the FRONT L/R speaker terminals.

Press the spring-loaded tab to open a terminal, insert the speaker wire, then release the tab to secure.



2 Connect the center speaker to the CENTER speaker terminals.

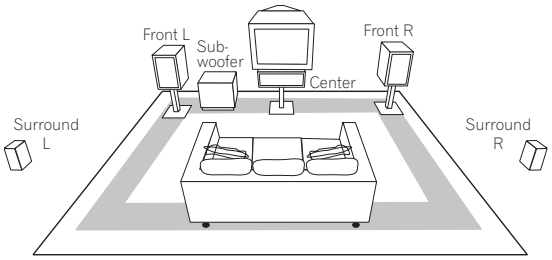
3 Connect the surround left and right speakers to the SURROUND L/R speaker terminals.

4 Connect the subwoofer to the SUBWOOFER OUT jack.

Placing the speakers

Where you put your speakers in the room has a big effect on the quality of the sound. The following guidelines should help you to get the best sound from your system.

- The subwoofer can be placed on the floor. Ideally, the other speakers should be at about ear-level when you're listening to them. Putting the speakers on the floor (except the subwoofer), or mounting them very high on a wall is not recommended.
- For the best stereo effect, place the front speakers 2–3 m apart, at equal distance from the TV.
- Install the center speaker above or below the TV so that the sound of the center channel is localized at the TV screen.
- When placing speakers near the TV, use magnetically shielded speakers to prevent possible interference, such as discoloration of the picture when the TV is switched on. If you do not have magnetically shielded speakers and notice discoloration of the TV picture, move the speakers farther away from the TV.
- If possible, install the surround speakers slightly above ear level.

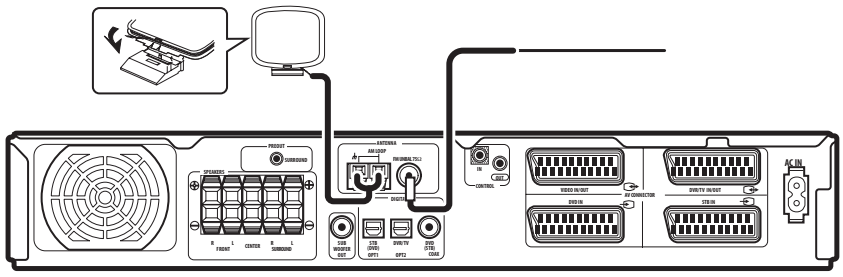


Caution

- Make sure that all speakers are securely installed. This not only improves sound quality, but also reduces the risk of damage or injury resulting from speakers being knocked over or falling in the event of external shocks such as earthquakes.

Connecting antennas

The supplied antennas provide a simple way to listen to AM and FM radio. If you find that reception quality is poor, an outdoor antenna should give you better sound quality—see *Connecting external antennas* below.

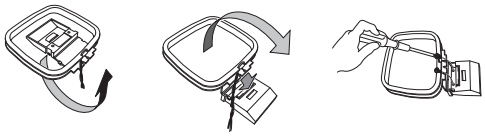


VSX-C402

AM loop antenna

1 Assemble the stand as shown in the illustration.

fig. A fig. B fig. C



- Bend the stand in the direction indicated (fig. A).
- Clip the loop into the stand (fig. B).
- It's possible to fix the AM antenna to a wall (fig. C). Before fixing, make sure that the reception is satisfactory.

2 Pull off the protective shields of both AM antenna wires.

3 Press the AM LOOP antenna terminal tabs to open and insert one wire into each terminal.

4 Release the tabs to secure the AM antenna wires.

5 Place the AM antenna on a flat surface and point in the direction giving the best reception.
Avoid placing near computers, television sets or other electrical appliances and do not let it come into contact with metal objects.

Note

- The signal ground (⏚) is designed to reduce noise that occurs when an antenna is connected. It is not an electrical safety ground.

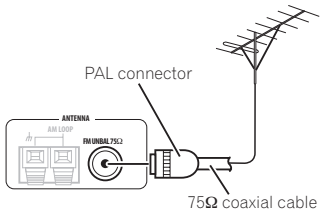
FM wire antenna

- **Connect the FM wire antenna to the FM UNBAL 75Ω antenna terminal.**

For best results, extend the FM antenna fully and fix to a wall or door frame. Don't drape loosely or leave coiled up.

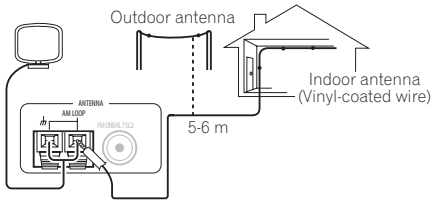
Connecting external antennas

To improve FM reception connect an external FM antenna to the **FM UNBAL 75Ω** antenna terminal.



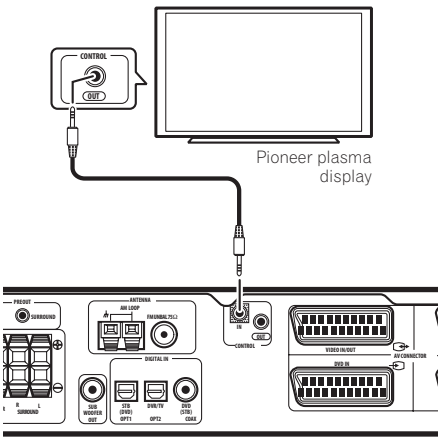
To improve AM reception, connect a 5-6 m length of vinyl-coated wire to the **AM LOOP** terminals without disconnecting the supplied AM loop antenna.

For the best possible reception, suspend horizontally outdoors.



Using this receiver with a Pioneer plasma display

If you have a Pioneer plasma display, you can use an SR+ cable (see note below) to connect it to this unit and take advantage of various convenient features, such as automatic video input switching of the plasma display when the input is changed.

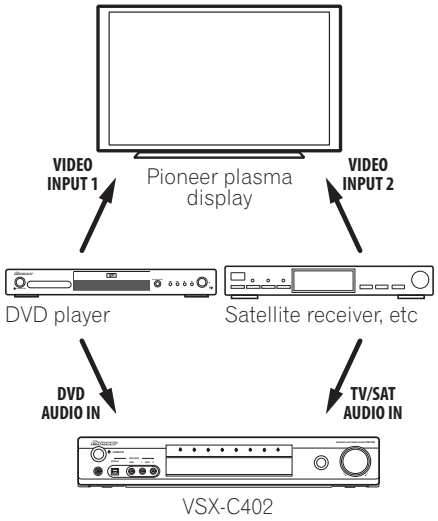


Note

- If you connect to a Pioneer plasma display using an SR+ cable, you will need to point the remote control at the plasma display remote sensor to control the receiver. In this case, you won't be able to control the receiver using the remote control if you switch the plasma display off.
- This receiver is compatible with all Pioneer plasma displays from 2003 onward.

- **Use a 3-ringed miniplug SR+ cable to connect the CONTROL IN jack of this receiver with the CONTROL OUT jack of your plasma display.**

Before you can use the extra SR+ features, you need to make a few settings in the receiver. See *Using the SR+ mode with a Pioneer plasma display* on page 35 for detailed instructions.



To make the most of the SR+ features, you should connect your source components (DVD player, etc.) in a slightly different way to that described in this chapter. For each component, connect the video output directly to the plasma display, and just connect the audio (analog and/or digital) to this receiver.

Note

- The 3-ringed SR+ cable from Pioneer is commercially available under the part number ADE7095-A. Contact the Pioneer Customer Support division for more information on obtaining an SR+ cable.

Plugging in the receiver

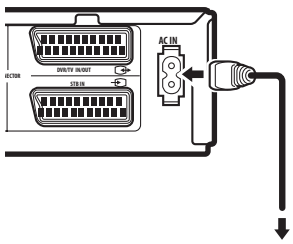
Only plug in after you have connected all your components, including the speakers.

Caution

- Handle the power cable by the plug. Do not pull out the plug by tugging the cable and never touch the power cable when your hands are wet as this could cause a short circuit or electric shock. Do not place the unit or a piece of furniture, etc., on the power cable, or pinch the cable. Never make a knot in the cable or tie it with other cables. The power cables should be routed such that they are not likely to be stepped on. A damaged power cable can cause a fire or give you an electrical shock. Check the power cable once in a while. When you find it damaged, ask your nearest Pioneer authorized service center or your dealer for a replacement.

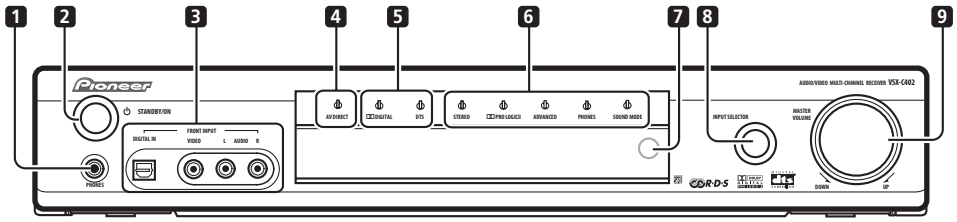
1 Plug the supplied power cable into the AC IN socket on the back of the receiver.

2 Plug the other end into a power outlet.



Chapter 4
Controls and displays

Front panel



1 PHONES jack
When headphones are connected there is no sound output from the speakers.

2 ⏻ STANDBY/ON button
Press to switch the receiver on or into standby.

3 FRONT INPUT jacks (page 13)
Use to connect an audio/video component.

4 AV DIRECT indicator (page 34)
Lights in standby when the receiver is passing an audio/video signal from one SCART AV connector to another.

5 Digital surround format indicators

DIGITAL indicator
Lights when the current source is Dolby Digital.

DTS indicator
Lights when the current source is DTS.

6 Listening mode indicators

STEREO indicator (page 24)
Lights when the source is stereo and/or the listening mode has been set to **STEREO**.

PRO LOGIC II indicator (page 24)
Lights when one of the Dolby Pro Logic II surround modes is active with a 2 channel (stereo) source.

ADVANCED indicator (page 25)
Lights when one of the Advanced Surround modes is active.

PHONES indicator (page 24)
Lights when phones surround mode is active.

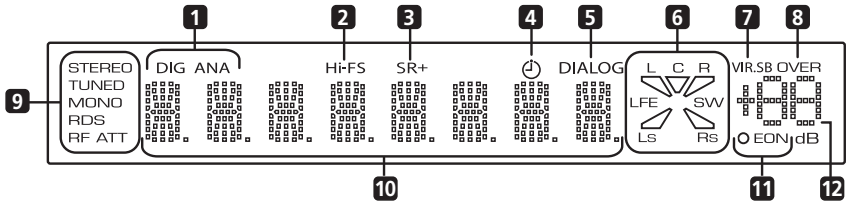
SOUND MODE indicator (page 25)
Lights when one of the Sound Modes is active.

7 Remote control sensor

8 INPUT SELECTOR knob (page 23)
Turn to cycle through the various inputs. The current input is shown in the front panel display.

9 MASTER VOLUME knob
Use to adjust the volume.

Display



1 DIG (digital) / ANA (analog) (page 30)
Indicates whether the current input source is analog or digital.

2 Hi-FS
Lights when the current input signal is 88.2/96 kHz digital.

3 SR+
Lights when the Control Mode Setting is set to **SR+ ON** for a connected plasma display to control this receiver.

4 Sleep timer indicator (page 30)
Lights when the sleep timer has been set.

5 DIALOG indicator (page 25)
Lights when Dialog Enhancement is on.

6 Input/output channel indicators
The letters **L**, **C**, **R**, **LFE**, **Ls** and **Rs** indicate the input channels coming into the receiver. The segments and **SW** (subwoofer) indicate the active speaker output channels.

7 VIR.SB indictor (page 25)
Lights when the Virtual Surround Back effect is on.

8 OVER (page 33)
Lights when the input signal is too high, risking distortion. Use the input attenuator to reduce the level.

9 Tuner indicators

STEREO (page 26)
Lights when listening to a stereo FM broadcast in auto/stereo mode.

TUNED
Lights when tuned to a broadcast.

MONO (page 26)
Lights when the tuner MPX mode is set to mono.

RDS (page 27)
Lights when listening to a station that is broadcasting RDS information.

RF ATT (page 26)
Lights when the RF attenuator is switched on.

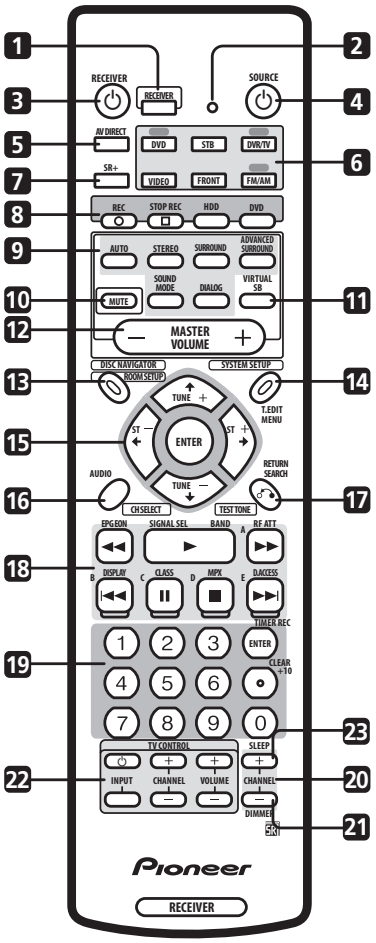
10 Character display

11 EON indicators (page 29)
EON lights when EON is set. The dot indicator to the left lights when the current broadcast carries the EON data service.

12 Volume level indicator
Indicates the volume level in dB.

Remote control

Function names printed in green on the remote control are receiver-related functions. Function names printed in blue are for the built-in tuner (see *Using the tuner* on page 26). Other functions relate to other equipment that you can control using this remote. See also *Controlling other equipment* on page 36.



1 RECEIVER
Press to put the remote in 'receiver' mode (i.e., the remote controls the receiver functions).

2 LED
Indicates a remote control operation.

3 ⏻ RECEIVER
Press to switch the receiver on or into standby.

4 ⏻ SOURCE (page 36)
Press to switch the current source component on or into standby.

5 AV DIRECT (pages 9 and 34)
Press to switch the AV Direct function on/off.

6 Input/remote control mode select buttons (page 23)
When the Remote Direct function is set to on, these buttons (except **FM/AM**) change the remote mode and the receiver input simultaneously. When set to off, they only switch the remote mode (see also *Recalling preset codes* on page 37).

DVD
Press to select **DVD** as the current input.

STB
Press to select **STB** (set-top box) as the current input.

DVR/TV
Press to select **DVR/TV** as the current input.

VIDEO
Press to select **VIDEO** as the current input.

FRONT
Press to select **FRONT** (the front panel audio/video inputs) as the current input.

FM/AM
Press to select **FM/AM** (the built-in tuner) as the current input.

7 SR+ (page 35)
Switches the SR+ mode on/off.

8 DVD recorder control buttons
When set up, these buttons can be used to control a Pioneer DVD recorder.

REC ●
Press to start recording.

STOP REC □
Press to stop recording.

HDD
Press to switch the recorder to HDD playback/recording.

DVD
Press to switch the recorder to DVD playback/recording.

9 Sound buttons (pages 24 and 25)

AUTO
Press to select the **AUTO** (default) sound for the current source (stereo, Dolby Digital, DTS, etc.) and switch off all other sound processing.

STEREO
Press to hear the current source in stereo.

SURROUND
Use to select a **SURROUND** mode for the current source.

ADVANCED SURROUND
Use to select an **ADVANCED SURROUND** mode for the current source.

SOUND MODE
Use to select a **SOUND MODE** for the current source.

DIALOG
Press to switch on/off **DIALOG** (dialog enhancement).

10 MUTE
Press to mute all output. Press again (or adjust the volume using the **MASTER VOLUME** control) to restore the sound.

11 VIRTUAL SB (page 25)
Press to select virtual surround options.

12 MASTER VOLUME
Use to adjust the volume.

13 ROOM SETUP (page 22)
Use to select a preset room setup.

14 SYSTEM SETUP (page 32)
Press to access the **SYSTEM SETUP** menu to make detailed receiver settings.

15 Cursor keys and ENTER
Use to navigate menus and select options/execute commands.

16 CH SELECT (page 35)
First press **RECEIVER**, then press **CH SELECT** repeatedly to select a speaker channel to adjust.

17 TEST TONE (page 35)
First press **RECEIVER**, then press **TEST TONE** to start/stop the test tone.

18 Playback controls (page 38)
Playback controls for external components, such as DVD and CD players.

Functions printed in blue control the built-in tuner; other functions control other external equipment.

19 Number buttons (page 38)
Use for numerical input of track numbers, radio frequencies, and so on.

20 CHANNEL +/– (page 38)
Use to change channels on a satellite receiver, cable box, VCR or DVR.

21 DIMMER
First press **RECEIVER**, then press **DIMMER** repeatedly to change the brightness/switch off the front panel display. The display will light brightly for about two seconds when you operate the receiver with the display off or dimmed. (Note that the master volume indicator always remains lit, even when the rest of the display is off.)

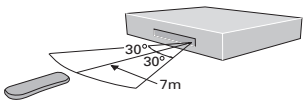
22 TV CONTROL buttons (page 39)
Use to control your TV (after setting up the remote control to work with your TV).

23 SLEEP (page 30)
First press **RECEIVER**, then press **SLEEP** repeatedly to put the receiver into sleep mode and select the length of time before the receiver turns off.

Operating range of the remote control

The remote control may not work properly if:

- There are obstacles between the remote control and the receiver's remote sensor.
- Direct sunlight or fluorescent light is shining onto the remote sensor.
- The receiver is located near a device that is emitting infrared rays.
- The receiver is operated simultaneously with another infrared remote control unit.



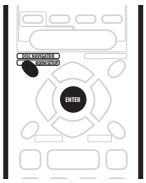
Chapter 5
Getting started

Using the Room Setup

- Default setting: **M** (medium) / **MID**

Before using your receiver to enjoy surround sound playback, we recommend you spend a few minutes using the Room Setup. This is a quick and easy way to get good surround sound for your room.

Depending on the distance of the surround speakers from your main listening position, choose between **S** (small), **M** (medium), or **L** (large) room, then depending on your seating position relative to the front and surround speakers, choose **FWD** (forward), **MID**, or **BACK**.



1 If the receiver isn't already on, press ⏻ RECEIVER to switch it on.

2 Press RECEIVER.

3 Press ROOM SETUP.

- If you have previously set up the room type and seating position, the display will show the current room settings (e.g., **S / MID**).

4 Press ENTER.

5 Press ROOM SETUP repeatedly to select a room type then press ENTER.

Choose one of the following depending on your room size:

- **S** – Smaller than average room (approx. 3.5 x 4.5 m)
- **M** – Average room (approx. 5.5 x 6.0 m)
- **L** – Larger than average room (approx. 7.5 x 9.0 m)

6 Press ROOM SETUP repeatedly to select a seating position setting, then press ENTER.

Choose one of the following depending on where your main listening position is:

- **FWD** – If you are nearer to the front speakers than the surround speakers
- **MID** – If you are equal distance from the front and surround speakers
- **BACK** – If you are nearer to the surround speakers than the front speakers

Note

- The Room Setup automatically sets up the channel levels and speaker distance according to the room size. If you have already set the channel levels and/or speaker distances manually (see *Setting individual channel levels* on page 35), you will see **ROOM SET** in the display when you first press the **ROOM SETUP** button.
- For more detailed surround sound setup, see *The System Setup menu* on page 32.

Checking the settings on your DVD (or other) player

Before continuing, you may want to check the digital audio output settings on your DVD player and digital satellite receiver.

- **Check that your DVD player/satellite receiver is set to output Dolby Digital, DTS and 96kHz PCM (2 channel) audio.**

If there is an option for MPEG audio, set this to convert the MPEG audio to PCM.

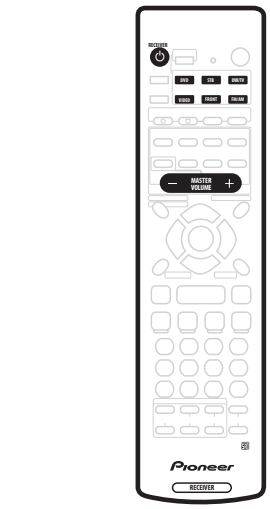
- In addition, if you're playing a DVD disc with more than one audio track, check that you've selected the right one.

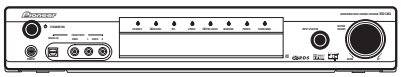
Note

- Depending on your DVD player or source discs you may not be able to output sound from other than digital 2 channel stereo and analog. In this case you need to change the listening mode to **SURROUND** if you want multichannel surround sound.

Playing a source

Here are the basic instructions for playing a source (such as a DVD disc) with your home theater system.





1 Turn on the power of the playback component (for example a DVD player), your TV and subwoofer (if you have one).

- If your source is the TV's built-in tuner, then switch to the channel you want to watch, otherwise make sure that the TV's video input is set to this receiver. (For example, if you connected this receiver to the **VIDEO 1** jacks on your TV, make sure that **VIDEO 1** input is now selected.)

2 If the receiver isn't already on, press ⏻ RECEIVER to switch it on.

3 Change the receiver input to the source you want to play.

You can use the front panel **INPUT SELECTOR** knob or the **INPUT** button on the remote.

- When the Direct function (see *Recalling preset codes* on page 37) is **ON** (the default setting), you can also use the **DVD**, **STB**, **DVR/TV**, **VIDEO**, **FRONT** or **FM/AM** buttons on the remote control to select the receiver input.

4 Start playback of the DVD (or other component).

If you're playing a Dolby Digital or DTS surround sound DVD disc, you should hear surround sound. If you are playing a stereo source, you will only hear sound from the front left/right speakers in the default listening mode.

- See also *Home theater sound* on page 24 for more information on different ways of listening to sources.

5 Use MASTER VOLUME (front panel or remote) to adjust the volume level.

- Turn down the volume of your TV so that all the sound is coming from the speakers connected to this receiver.

Note

- If you need to change the input signal type from digital to analog, press **SIGNAL SELECT** (see also *Selecting the input signal type* on page 30).
- For more detailed surround sound setup, see *The System Setup menu* on page 32.

Chapter 6

Home theater sound

Using this receiver you can enjoy listening to sources, analog or digital, in either stereo or surround sound.

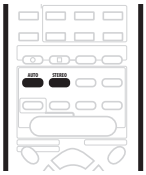
Note

- Many of the surround sound effects described in this section require surround speakers. If you don't have surround speakers connected, or they are turned off, many of the listening modes are unavailable.
- Except for Dialog Enhancement and Virtual Surround Back, the current listening modes are retained for each input function (**DVD**, **FM/AM**, etc.).

Playing multichannel sources

Multichannel sources, such as DVDs and digital satellite broadcasts, can be played in multichannel surround sound, or in 2 channel stereo.

See also *Using the Sound Modes* on page 25, and *Using the Advanced Surround effects* on page 25, for further stereo and surround playback options.



- **During playback of a multichannel source press AUTO for surround sound playback.**

The **DIGITAL** or **DTS** indicator on the front panel lights depending on the source format. Any active Advanced Surround mode is cancelled.

- **To switch to stereo playback, press STEREO.**

The **STEREO** indicator on the front panel lights.

Any active Advanced Surround mode is cancelled, but you can still use the Sound Modes.

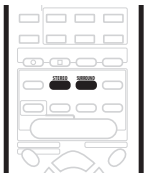
Note

- When you play a multichannel source in **STEREO**, all channels are mixed to the front speakers.
- When playing 88.2/96 kHz digital sources, only the **STEREO** listening mode is available.

Playing stereo sources

Stereo sources, such as CD, FM radio and TV broadcasts, can be played in stereo, or through all your speakers using one of the various Surround modes.

See also *Using the Sound Modes* on page 25, and *Using the Advanced Surround effects* on page 25, for further stereo and surround playback options.



- **During playback of a stereo source, press STEREO for stereo playback.**

The **STEREO** indicator on the front panel lights.

Any active Advanced Surround or Pro Logic II mode is cancelled, but you can still use the Sound Modes.

- **To play the source in surround sound, press SURROUND to select a Pro Logic II mode.**

Press repeatedly to select a Pro Logic II mode (front panel Pro Logic II indicator lights):

- **MOVIE** – 5.1 channel sound, especially suited to movie sources
- **MUSIC** – 5.1 channel sound, especially suited to music sources
- **PROLOGIC** – 4.1 channel surround sound (sound from the surround speakers is mono)

Note

- When playing 88.2/96 kHz digital sources, only the **STEREO** listening mode is available.

Listening with headphones

When headphones are connected, only the **STEREO** (default) and **PHONES SURROUND** (virtual surround sound for headphones) modes are available.

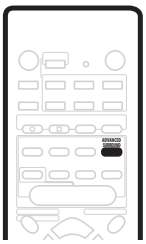
When you connect a pair of headphones, the listening mode automatically changes to **STEREO**. When you disconnect them it reverts to the previous mode.

1 Press RECEIVER.

2 With headphones connected, press ADVANCED SURROUND to select PHONES SURROUND, or STEREO for stereo sound.

Using the Advanced Surround effects

Advanced Surround effects can be used with multichannel or stereo sources for a variety of additional surround sound effects.



- **Press ADVANCED SURROUND to select an Advanced Surround mode.**

Press repeatedly to select from:

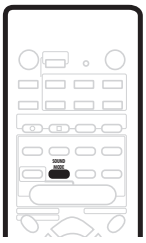
- **ADV. MOVIE** – Gives a movie theater-type sound
- **ADV. MUSIC** – Gives a concert hall-type sound
- **TV SURR.** – Designed for mono or stereo TV broadcasts and other sources
- **SPORTS** – Designed for sports and other programs based on commentary
- **GAME** – Creates surround sound from video game sources
- **EXPANDED** – Creates an extra wide stereo field
- **5-STEREO** – Designed to give powerful surround sound to stereo music sources
- **VIRTUAL** – Creates the impression of surround sound from just the front speakers (Sound Modes are unavailable when **VIRTUAL** is selected)

Note

- You can use any of the above Advanced Surround modes with any source. The descriptions are given only as a guide.

Using the Sound Modes

The Sound Modes create a variety of tonal and dynamic effects that can be used with multichannel or stereo sources.



- **Press SOUND MODE to select a Sound Mode.**

Press repeatedly to select from:

- **OFF** – No Sound Mode
- **MIDNIGHT** – For effective surround sound at low volume
- **QUIET** – Reduces the impact of deep bass and piercing highs
- **BRIGHT** – Adds high-end 'sparkle'
- **S. BASS** – Adds extra power to the low-end.

Enhancing dialog

- Default setting: **DIALOG OFF**

The dialog enhancement feature is designed to make the dialog stand out from other background sounds in a TV or movie soundtrack.

- **Press DIALOG to select the amount dialog enhancement.**

Press repeatedly to select from:

- **DIALOG OFF** – No dialog enhancement
- **DIALOG ON** – Dialog enhancement

Listening with virtual surround back speakers

- Default setting: **VIR.SB OFF**

The Virtual Surround Back feature simulates listening with an added surround back channel. In a real theater the surround back speaker would be directly behind you, creating more cohesive and realistic surround sound.

Note that the this feature only works when the surround channels are active.

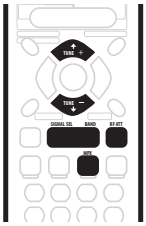
1 Press RECEIVER.

2 Press VIRTUAL SB repeatedly to switch between VIR.SB ON and VIR.SB OFF.

Chapter 7
Using the tuner

Finding a station

The following steps show you how to tune in to FM and AM radio broadcasts using the automatic (search) and manual (step) tuning functions. If you already know the exact frequency of the station you want to listen to, see *Tuning directly to a station* below. Once you are tuned to a station you can memorize the frequency for recall later—see *Memorizing station presets* below for more on how to do this.



1 Press the FM/AM button on the remote control to put it in tuner mode.

2 Press BAND (or FM/AM) to change the band (FM or AM), if necessary.
Each press switches the band between FM and AM.

3 Tune to a station using the TUNE +/– buttons.

Automatic tuning
To search for stations in the currently selected band, press and hold either the **TUNE +/–** buttons for about a second. The receiver will start searching for the next station, stopping when it has found one. Repeat this step to search for other stations.

Manual tuning
To change the frequency one step at a time, press the **TUNE +/–** buttons.

High speed tuning
Press and hold the **TUNE +/–** buttons for high speed tuning, releasing the button once the desired frequency is reached.

MPX mode

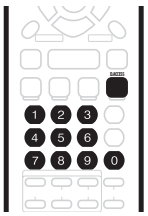
If there is interference or noise during a stereo FM radio broadcast (the **STEREO** indicator is lit), or the radio reception is weak, press **MPX** (remote control only) to switch the receiver into mono reception mode (the **MONO** indicator lights). This should improve the sound quality and allow you to enjoy the broadcast.

RF attenuator mode

If the radio signal is too strong and/or the sound is distorting press the **RF ATT** button to attenuate (lower) the radio signal input and reduce the distortion (for FM stations only).

Tuning directly to a station

Sometimes, you'll already know the frequency of the station you want to listen to. In this case, you can simply enter the frequency directly using the number buttons on the remote control.



1 Press the FM/AM button on the remote control to put it in tuner mode.

2 Press BAND (or FM/AM) to change the band (FM or AM), if necessary.
Each press switches the band between FM and AM.

3 Press D.ACCESS (Direct access).

4 Use the number buttons to enter the frequency of the radio station.
For example, to tune to 106.00 (FM), press **1**, **0**, **6**, **0**, **0**.

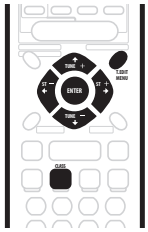
Note

- If you make a mistake while inputting the frequency, press the **D.ACCESS** button twice to cancel the frequency and start again.

Memorizing station presets

If you often listen to a particular radio station, it's convenient to have the receiver store the frequency for easy recall whenever you want to listen to that station. This saves the effort of manually tuning in each time. The receiver can memorize up to 30 stations, stored in three banks, or classes, (A, B and C) of 10 stations each. When memorizing FM frequencies, the receiver also stores the

MPX setting (see *MPX mode* on page 26) and the RF attenuator setting (see *RF attenuator mode* on page 26).



1 Tune to a station you want to memorize.
See *Finding a station* on page 26 and *Tuning directly to a station* on page 26 for more detail on how to do this.

2 Press T.EDIT.
The display shows **ST. MEMORY** then a blinking memory class (**A**, **B** or **C**).

3 Press CLASS to select one of the three classes.
Press repeatedly to cycle through the three memory classes, **A**, **B** and **C**.

4 Use the ST +/– buttons (or the number buttons) to select the station memory number you want.
Press repeatedly to cycle through the 10 available station memories in each class.

5 While the display is blinking, press ENTER.

6 Repeat steps 1 – 5 to memorize up to 30 stations.

Naming station presets

You can input a name of up to four characters for each preset station in the receiver's memory. For example, you could input **BBC1** for that station and when you listen to it the name, rather than the frequency number, will appear in the display.

1 Press the FM/AM button on the remote control.

2 Press CLASS repeatedly to select the class.
Press repeatedly to cycle through the three memory classes, **A**, **B** and **C**.

3 Use the ST +/– buttons to select an FM preset station.

4 Press T.EDIT to select the station name mode (ST.NAME).

5 Use the ⬅/➡ (cursor left/right) buttons to choose the first character.
Scroll through the letters, numbers and symbols, stopping on the one you want.

6 Press ENTER to input the first of the four characters.
That character lights steadily in the display and the cursor automatically moves to the next space.

7 Enter up to three more characters in the same way.
Any time you want to exit the process you can press the **T.EDIT** button.

8 Press ENTER when you have got the characters you want to enter.

9 Repeat steps 2 – 6 to memorize up to 30 preset broadcast station names.

Tip

- To change a station name, just enter the new name over the top of the old one. To erase a station name, enter a new name of four spaces.
- When not in one of the RDS modes (see below), you can switch between the frequency display and the station name display using the **DISPLAY** button.

Listening to memorized station presets

1 Press the FM/AM button on the remote control.

2 Press CLASS to select the class in which the station is stored.
Press repeatedly to cycle through the three memory classes, **A**, **B** and **C**.

3 Use the ST +/– buttons to select the station memory in which the station is stored.
You can also use the number buttons on the remote control to recall the station preset.

Note

- If the power is left disconnected from the receiver for more than about a month, the station presets will be lost and will have to be reprogrammed.

Radio Data System (RDS)

Radio Data System, or RDS as it's usually known, is a system used by FM radio stations to provide listeners with various kinds of information—the name of the station and the kind of show they're broadcasting, for example. This information shows up as text on the display, and you can switch between the kind of information shown. Although you don't get RDS information from all FM radio stations, you do with most.

Probably the best feature of RDS is that you can search automatically by type of program. So, if you felt like listening to jazz, you could search for a station that's broadcasting a show with the program type, **JAZZ**. There are around 30 such program types, including various genres of music, news, sport, talk shows, financial information, and so on.

The receiver lets you display three different kinds of RDS information: Radio Text (RT), Program Service Name (PS), and Program Type (PTY).

Radio Text (RT) is messages sent by the radio station. These can be anything the broadcaster chooses—a talk radio station might give out it telephone number as RT, for example.

Program Service Name (PS) is the name of the radio station.

Program Type (PTY) indicates the kind of program currently being broadcast.

The receiver can search for and display the following program types:

NEWS – News
AFFAIRS – Current affairs
INFO – General information
SPORT – Sport
EDUCATE – Educational material
DRAMA – Radio plays or serials
CULTURE – National or regional culture, theatre, etc.
SCIENCE – Science and technology
VARIED – Usually talk-based material, such as quiz shows or interviews.
POP M – Pop music
ROCK M – Rock music
EASY M – Easy listening music
LIGHT M – 'Light' classical music
CLASSICS – 'Serious' classical music
OTHER M – Other music not fitting any of the above categories
WEATHER – Weather
FINANCE – Stock market reports, commerce, trading, etc.
CHILDREN – Programs for children
SOCIAL – Social affairs
RELIGION – Programs concerning religion
PHONE IN – Public expressing their views by phone
TRAVEL – Holiday-type travel rather than traffic announcements
LEISURE – Leisure interests and hobbies
JAZZ – Jazz
COUNTRY – Country music
NATION M – Popular music in a language other than English
OLDIES – Popular music from the '50s and '60s
FOLK M – Folk music
DOCUMENT – Documentaries

In addition, there are three other program types, **ALARM**, **NO DATA** and **NO TYPE**. **ALARM** used for exceptional emergency announcements. You can't search for this, but the tuner will switch automatically to this RDS broadcast signal. **NO DATA** is displayed when there is no RDS data to display. **NO TYPE** appears when a type cannot be found.

Displaying RDS information

Use the **DISPLAY** button to display the different types of RDS information available (RT, PS and PTY).

- **Press DISPLAY to select the RDS information display.**

Each press changes the display as follows:

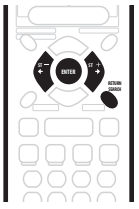
- **RT** – Radio Text display
- **PS** – Program Service display
- **PTY** – Program Type display
- Current tuner frequency

Note

- In the PS mode, if you have entered a station name for the currently tuned station, this is displayed rather than the RDS PS broadcast.
- In the RT mode, if any noise is picked up while displaying the text, some characters may be displayed incorrectly temporarily.
- In the RT, when no RT data is transmitted from the broadcast station, **NO RADIO TEXT DATA** is displayed once and after that the PS data is displayed. If you have entered a name for that station it will be displayed.
- In the PTY mode, there are cases where **NO DATA** is displayed. In this case the tuner will automatically switch to the PS mode after a few seconds.
- If reception conditions are strong but the RDS data is displayed incorrectly, press **RF ATT**.

Searching for RDS programs

One of the most useful features of RDS is the ability to search for a particular kind of radio program. You can search for any of the program types listed on the previous page —these cover all kinds of music, as well as news, weather forecasts, sports programs, and a variety of others.



1 Press SEARCH.

2 Use the ⬅/➡ (cursor left/right) buttons to select the program type you want to hear.

3 Press ENTER to search for the program type.
The tuner searches through the FM stations stored in the station memories.

If the tuner finds a matching program type, the tuner plays 5 seconds of the station. To listen to that station, press the **ENTER** button. (The tuner stops searching.)

If you don't press the **ENTER** button during the above mentioned 5 seconds, the tuner resumes the search.

When the tuner finds a program type you searched for, the frequency display will blink for about 5 seconds and then the display will show **FINISH** briefly.

If **NO PTY** is displayed it means the tuner couldn't find that program type at the time of the search.

Note

- This function searches RDS stations preset in the 30-station memory. If there are no station presets, or if the program type could not be found among the station presets **NO PTY** is displayed.

Enhanced Other Network (EON)

EON (Enhanced Other Network information) allows you to set the receiver to switch automatically to a news or traffic information broadcast. Once set, the receiver will scan for stations transmitting news or traffic announcements even when it's in a different input function (**DVD**, for example). When the broadcast ends, the tuner returns to the original frequency or input function.

EON can only be used in areas where EON data is transmitted, and it only works with FM broadcast stations that transmit RDS program type (PTY) information.

The **EON** indicator lights when EON is set. The dot indicator to the left lights when the current broadcast carries the EON data service.

1 Press the FM/AM button to put the receiver in FM tuner mode.

2 Press EON to select the EON mode.
Press repeatedly to switch between:

- **TA (Traffic Announcement)** – Sets the tuner to pick up traffic information when it is broadcast.
- **NEWS** – Sets the tuner to pick up news when it is broadcast.
- **OFF** – Switches off the EON feature.

When set to **TA** or **NEWS**, the **EON** indicator in the display lights. When the receiver switches automatically to an EON broadcast, the dot indicator blinks.

Note

- The EON function does not work when listening to AM reception, or when the AV Direct function is on (see *The AV Direct mode* on page 9 and *AV Direct setting* on page 34).
- Simultaneous requests for Traffic Information (**TA**) and News (**NEWS**) is not possible.
- When EON is turned on and a function other than the tuner is selected, the function will switch to the FM station automatically when Traffic Information or News begins. When the program ends, the original function will be restored.
- You cannot use the **T.EDIT** and **SEARCH** buttons while the **EON** indicator in the display is lit.
- You can't change the input function while receiving an EON broadcast. If you want to change to a source other than tuner, press **EON** and turn the EON mode to **OFF**.

Program identification function

The receiver will automatically register an identifying marker (called a PI code) for any station you input into the memory classes which can receive RDS or EON data. If you want to remove the currently memorized stations from RDS and EON searches, you can do it by erasing the PI codes.

1 Tune to the station for which you want to erase the PI marker.

2 Press EON for two seconds or more.
ERASE PI is displayed.

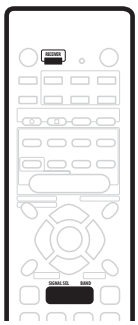
3 Press ENTER within 5 seconds.

Chapter 8
Using other functions

Selecting the input signal type

The **DVD**, **STB**, **DVR/TV** and **FRONT** inputs all have both analog and digital jacks. You can select the type of signal to be used in each case. The input signal type for the current input is indicated in the display: **ANA** (analog), **DIG** (digital).

The default **AUTO** setting is usually sufficient, letting the receiver decide the most suitable signal type. However, if you want to record from the **VIDEO IN/OUT** AV connector or the **DVR/TV IN/OUT** AV connector, then you should set the input signal type to analog.



1 Press RECEIVER.

2 Press SIGNAL SELECT to change the input signal type.

- **SEL. AUTO** – (default setting) Uses digital if available, otherwise analog
- **SEL. ANA** – Uses the analog signal
- **SEL. DIG** – Uses the digital signal

Note

- When the **VIDEO** or **FM/AM** inputs are used, the display always shows **ANA** (analog).

Using the sleep timer

The sleep timer automatically puts the receiver into standby after the specified period of time.

1 Press RECEIVER.

2 Press SLEEP to set the sleep timer.

Press repeatedly to select between:

- **90 MIN.** – Switches to standby after 90 minutes
- **60 MIN.** – Switches to standby after one hour
- **30 MIN.** – Switches to standby after 30 minutes

The sleep timer indicator (⏲) lights when the sleep timer has been set.

Note

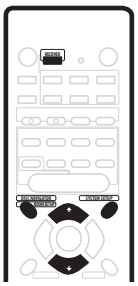
- The sleep timer is cancelled if you switch on the AV Direct function. See also *The AV Direct mode* on page 9 and *AV Direct setting* on page 34.

Tip

- Press the **SLEEP** button once to view how much time is left on the timer before shutdown. Each press after that will cycle through the possible sleep time lengths.

Resetting the system

Use this feature to reset the system to its factory default settings.



1 Press RECEIVER.

2 In standby, press ROOM SETUP and SYSTEM SETUP at the same time.
The display prompts you to confirm.

3 Within 5 seconds, press ⬇.
The display shows **OK?**.

4 Within 5 seconds, press ⬆.
The receiver should now be reset.

Note

- If the receiver is disconnected from the power outlet for more than a month it will reset to the default settings.
- The above reset doesn't affect the presets that you have programmed into the remote control (see *Using the remote control with other components* on page 36).

Default receiver settings

The table below shows the factory default settings. When you reset the system, the receiver reverts to these defaults (see *Resetting the system* above).

Setting type	Default setting	Page ref.
Input	**DVD**	
Master volume	**– – – dB** (no sound)	
Listening mode	**AUTO** (all inputs)	Page 24
Listening mode (w/ headphones)	**STEREO** (all inputs)	Page 24
Sound mode	**OFF**	Page 25
Dialog	**OFF**	Page 25
Virtual Surround Back	**OFF**	Page 25
Input signal select	**AUTO**	Page 30
Speakers (Front, Center, Surround) Setting	Automatically sensed	Page 32
Subwoofer setting	**200 Hz**	Page 32
LFE Attenuator	**0 dB**	Page 33
Front speaker distance	**2.0 m**	Page 33
Center speaker distance	**2.0 m**	Page 33
Surround speaker distance	**2.0 m**	Page 33
Dynamic Range Control	**OFF**	Page 33
Dual Mono	**ch1**	Page 33
Input Attenuator	**OFF** (all inputs)	Page 33
DVD(STB) COAX jack assignment	**DVD**	Page 33
STB(DVD) OPT1 jack assignment	**STB**	Page 33
Channel levels	Front: **0 dB** Center: **0 dB** Surround: **0 dB** Subwoofer: **0 dB**	Page 35
AV Direct setting	**MANUAL**	Page 34
Auto Input Select setting	**MANUAL**	Page 34
Room Setup	**M / MID**	Page 22
SR+	**OFF**	Page 34

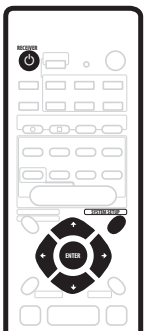
Note

- The default settings for the remote control to control other components can be found in *Using the remote control with other components* on page 36.

Chapter 9
The System Setup menu

Making receiver settings from the System Setup menu

This receiver allows you to make detailed settings to optimize the surround sound performance. You only need to make these settings once (unless you change the placement of your current speaker system or add new speakers).



1 If the receiver isn't already on, press ⏻ RECEIVER to switch it on.

2 Press SYSTEM SETUP to enter the setup menu.

3 Use the ⬅ and ➡ buttons to select a setup parameter to adjust.

As you scroll through the options, the current settings are displayed. See below for a full list and description of each.

4 Use the ⬆ and ⬇ buttons to change the current setting.

5 After making all the settings, press ENTER to exit the setup menu.

Setup menu options

Below are all the available settings in the setup menu. The first setting in each section is the default. See also the notes in each section for additional information about the settings.

Front speakers setting

Specifies the size of the front speakers:

- **FRONT S** – Small (the cone diameter is less than 12 cm)
- **FRONT L** – Large (the cone diameter is 12 cm or greater)

Center speaker setting

Specifies the size of the center speaker:

- **CENTER S** – Small (the cone diameter is less than 12 cm)
- **CENTER L** – Large (the cone diameter is 12 cm or greater)
- **CENTER —** – If you have not connected a center speaker

Surround speaker setting

Specifies the size of the surround speakers:

- **SURR. S** – Small (the cone diameter is less than 12 cm)
- **SURR. L** – Large (the cone diameter is 12 cm or greater)
- **SURR. —** – If you have not connected surround speakers

Note

- If the front speakers are set to **FRONT S** you can't choose **SURR. L** for the surround speakers or **CENTER L** for the center speaker.

Subwoofer setting

This option only appears if you have connected a subwoofer. Note that some subwoofer settings are not available depending on other speaker settings.

Specifies the behavior of the subwoofer:

- **SUBWF 200** – Most of the bass frequencies are played through the subwoofer
- **SUBWF 150** – Only the very lowest bass frequencies are played through the subwoofer
- **SUBWF 100** – Mid setting
- **SUBWF PLS** – For extra bass power
- **SUBWF ——** – No sound from the subwoofer

Note

- The **SUBWF PLS** setting is only available when the front speakers are set to **FRONT L**.
- When all speakers are set to **L**, you cannot select the **SUBWF 200**, or **SUBWF 150** settings.
- If you set the front speakers to **FRONT S**, you cannot select the **SUBWF ——** setting.
- Depending on the source and other receiver settings, you may not always hear sound from the subwoofer.

LFE attenuator setting

Dolby Digital and DTS audio sources include ultra-low bass tones. Set the LFE attenuator as needed to prevent the ultra-low bass from distorting the sound.

- **LFEATT 0** – The LFE channel is played with no attenuation
- **LFEATT10** – LFE channel is attenuated by 10 dB
- **LFE OFF** – LFE channel is not played

Front speaker distance setting

Specifies the distance from your listening position to the front speakers:

- **Fch 0.1 m.** – **Fch 9.0 m.** – Distance can be set in increments of 0.1 m. The default is 2.0 m.

Center speaker distance setting

Specifies the distance from your listening position to the center speaker:

- **Cch 0.1 m.** – **Cch 9.0 m.** – Distance can be set in increments of 0.1 m. The default is 2.0 m.

Surround speaker distance setting

Specifies the distance from your listening position to the surround speakers:

- **Sch 0.1 m.** – **Sch 9.0 m.** – Distance can be set in increments of 0.1 m. The default is 2.0 m.

Dynamic Range Control

Specifies the amount of dynamic range adjustment to Dolby Digital soundtracks:

- **DRC OFF** – No dynamic range adjustment (use when listening at higher volume)
- **DRC MAX** – Dynamic range is reduced (loud sounds are reduced in volume while quieter sounds are increased)
- **DRC MID** – Mid setting

Note

- This setting works only with Dolby Digital soundtracks. For other sources you can create a similar effect using the Midnight mode (see *Using the Sound Modes* on page 25).

Dual mono setting

Specifies how dual mono encoded Dolby Digital soundtracks should be played:

- **ch1** – Only channel 1 is played
- **ch2** – Only channel 2 is played
- **L. c1 R. c2** – Both channels are played through the front speakers

Note

- On the **ch1** and **ch2** settings the sound comes only from the center speaker (or from the front speakers if **CENTER**)**—** was selected for the center speaker setting.
- This setting works only with dual mono encoded Dolby Digital soundtracks. See the disc packaging for channel information.

Input attenuator setting

When playing analog sources, if the sound is distorting (or when you see the **OVER** indicator light in the display), switch on the input attenuator. Each input has its own attenuator setting; set it for the currently selected input.

- **IN. ATT OFF** – Input attenuator is off
- **IN. ATT ON** – Input attenuator is on

Coaxial input setting

Specifies which receiver function the coaxial input (**DVD(STB) COAX** jack) relates to:

- **COAX DVD** – Assigns the input to the receiver's **DVD** function
- **COAX STB** – Assigns the input to the receiver's **STB** function (the optical input is automatically set to **DVD**)

Note

- See also *Connecting your equipment* on page 8.

Optical input setting

Specifies which receiver function the optical input (**STB(DVD) OPT1** jack) relates to:

- **OPT1 STB** – Assigns the input to the receiver's **STB** function
- **OPT1 DVD** – Assigns the input to the receiver's **DVD** function (the coaxial input is automatically set to **STB**)

Note

- See also *Connecting your equipment* on page 8.
- You cannot assign the other optical input (**DVR/TV OPT2** jack).

AV Direct setting

The AV Direct mode allows the receiver to pass audio/video signals arriving at one of the AV connector inputs to the other AV connector outputs without the sound being routed to the speakers. (See also *The AV Direct mode* on page 9.) In AV Direct mode, the current input is shown (at reduced brightness) in the front panel display.

The AV Direct setting determines whether the receiver switches to AV Direct mode automatically, or only when you switch it manually.

- **AVD MANU** – Allows you to switch between standby and AV Direct mode using the **AV DIRECT** button on the remote control.
- **AVD AUTO** – Automatically switches to AV Direct mode when an incoming signal is sensed by the receiver in standby.

Auto input select setting

Specifies how the receiver responds when it senses that a component connected to one of the SCART AV connectors is switched on.

- **SEL MANU** – You must select the receiver's input manually using the front panel **INPUT SELECTOR**, or the input buttons on the remote control.
- **SEL AUTO** – When a component connected to one of the SCART AV connectors (except the **DVR/TV**) is switched on, the receiver automatically switches to that input.

Note

- When set to **AVD AUTO**, if a connected component is switched on, you cannot switch this receiver into standby (**INPUT ON** appears in the display).
- You can't use the sleep timer when the AV Direct setting is **AVD AUTO** (see also *Using the sleep timer* on page 30).
- AV Direct does not work when EON is on (see also *Enhanced Other Network (EON)* on page 29).

SR+ control for Pioneer plasma displays

Make the following settings if you have connected a Pioneer plasma display to this receiver using an SR+ cable. Note that the number of function settings available will depend on the plasma display you've connected.

See also *Using this receiver with a Pioneer plasma display* on page 16 and *Using the SR+ mode with a Pioneer plasma display* on page 35.

Volume control setting

- **VOL C OFF** – The receiver does not control the volume of the plasma display
- **VOL C ON** – When the receiver is switched to one of the inputs that use the plasma display (**DVD**, or another one of functions listed below), the volume on the plasma display is muted so only sound from the receiver is heard.

Function setting for DVD input

- **DVD:1** – **DVD:5** or **TV** – Matches the **DVD** function of the receiver with a numbered video input on the plasma display. For example, **DVD:3** matches the **DVD** input with video input 3 on the plasma display.

Function setting for STB input

- **STB:1** – **STB:5** or **TV** – Matches the **STB** function of the receiver with a numbered video input on the plasma display. For example, **STB:1** matches the **STB** input with video input 1 on the plasma display.

Function setting for DVR/TV input

- **DVR:1** – **DVR:5** or **TV** – Matches the **DVR/TV** function of the receiver with a numbered video input on the plasma display. For example, **DVR:2** matches the **DVR/TV** input with video input 2 on the plasma display.

Function setting for VIDEO input

- **VIDEO:1** – **VIDEO:5** or **TV** – Matches the **VIDEO** function of the receiver with a numbered video input on the plasma display. For example, **VIDEO:TV** matches the **VIDEO** input with **TV** on the plasma display.

Function setting for FRONT input

- **FRONT:1** – **FRONT:5** or **TV** – Matches the **FRONT** function of the receiver with a numbered video input on the plasma display. For example, **FRONT:4** matches the **FRONT** input with video input 4 on the plasma display.

Using the SR+ mode with a Pioneer plasma display

When connected using an SR+ cable, a number of features become available to make using this receiver with your Pioneer plasma display even easier. These features include:

- Automatic video input switching on the plasma display.
- Automatic volume muting on the plasma display. (When **VOL C ON** is selected.)

See also *Using this receiver with a Pioneer plasma display* on page 16 for connecting up, and *SR+ control for Pioneer plasma displays* on page 34 for setting up the receiver.

1 Make sure that the plasma display and this receiver are switched on and that they are connected with the SR+ cable.

See *Using this receiver with a Pioneer plasma display* on page 16 for more on connecting these components.

2 To switch SR+ mode on/off, press the SR+ button on the remote control.

Note

- The **SR+** setting remains in effect even if the power is switched off.
- The automatic volume muting feature is enabled separately; see *SR+ control for Pioneer plasma displays* on page 34.

Setting individual channel levels

Use to set the relative volume of each channel as you find necessary for balanced surround sound.

1 Use MASTER VOLUME to adjust the volume to an appropriate level.

2 Press RECEIVER then TEST TONE to output the test tone.

The test tone is output in the following order (from speakers that are switched on and are appropriate for the current listening mode):

- **L** – Front left
- **C** – Center
- **R** – Front right
- **RS** – Right surround
- **LS** – Left surround
- **SW** – Subwoofer

3 Use the ↑/↓ (cursor up/down) buttons to adjust speaker levels so that you hear the test tone at the same volume from each speaker when seated in your main listening position.

- The channel level range is ± 10 dB.

4 Press RECEIVER then TEST TONE to turn off the test tone.

Note

- Since the subwoofer transmits an ultra-low frequency its sound may seem quieter than it actually is. Be careful not to turn up your subwoofer too much and check the volume with an actual source.
- The subwoofer volume is best controlled with the volume control on the subwoofer unit itself.
- The speaker volume can be adjusted without outputting the test tone by pressing **CH SELECT** then using the ↑/↓ (cursor up/down) buttons. This level setting mode is automatically exited after 5 seconds of inactivity.
- The default setting is **0 dB** for all channels.

Chapter 10

Controlling other equipment

Using the remote control with other components

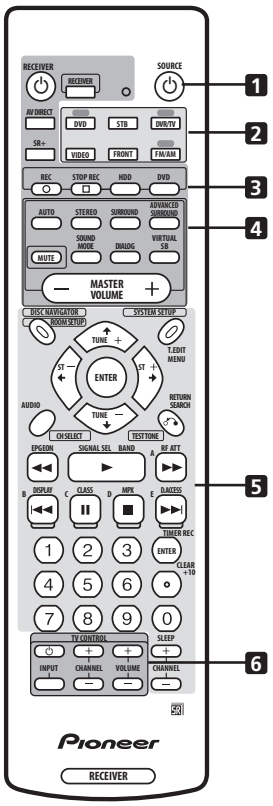
The supplied remote control can operate not only this receiver, but also your TV, DVD player and other components, once you've programmed it with the appropriate preset code.

When you select an input (**DVD**, **STB**, **DVR/TV**, **VIDEO**, **FRONT** or **FM/AM**), you change both the receiver's input source and the remote control mode. Some buttons on the remote have different functions depending on the current mode of the remote.

The **TV CONTROL** buttons are dedicated to controlling the TV. They will always control the TV no matter what operation mode the remote is in. Similarly, the DVD recorder controls (**REC** ●, **STOP REC** □, **HDD** and **DVD**)

The default preset codes are shown in the table.

Input/control mode select button	Preset code	Component (manufacturer)
DVD	020	DVD (Pioneer)
STB	200	STB (Pioneer)
DVR/TV	466	DVD recorder (Pioneer)
VIDEO	231	TV (Pioneer)
FRONT	100	LD (Pioneer)
FM/AM	500	Tuner (Pioneer)
TV CONTROL	600	TV (Pioneer)



1 ⏻ SOURCE

According to the current remote mode, switches an external component on or into standby.

2 Input/control mode select buttons

Changes the receiver input and also the mode of the remote control.

3 DVD recorder control buttons

Dedicated buttons for controlling a Pioneer DVD recorder.

4 Receiver control buttons

Buttons used only for controlling receiver functions.

5 Buttons for controlling other components

The function of a particular button varies according to the remote control mode and the type of component being controlled. (Some buttons also control receiver functions.)

6 TV CONTROL buttons
Dedicated buttons for controlling your TV.

Recalling preset codes

The following steps show you how to recall preset codes for each input and for the **TV CONTROL** buttons.

1 Press RECEIVER and number button '1' at the same time.
The LED starts blinking.

- To cancel the preset mode at any time press **RECEIVER**.
- The remote control will also return to the previous mode after one minute of inactivity.

2 Press the input select button you want to preset.
Select **DVD**, **DVR/TV**, **FRONT**, **STB**, or **VIDEO**.

- To preset the **TV CONTROL** buttons, press **TV CONTROL** ⏻.

The LED stops blinking and remains lit.

3 Use the number buttons to enter a 3 digit setup code.
See *Preset code list* on page 40 for a list of all the codes of different types of equipment.

The LED starts blinking again.

After entering a code, a power on/off command is transmitted by the remote. If the component you want to control can be switched on/off by remote, it should now switch on/off.

If the other component fails to switch on/off, try another preset code if there is one available.

4 Repeat process to assign preset codes for as many components as you want.

Note

- See *Preset code list* on page 40 for the components and manufacturers available.
- The preset codes cover a wide variety of equipment, however, there may be some models from a particular manufacturer that do not work with any of the available codes.
- With some components, not all functions are controllable by this remote.
- Refer to *VCR / DVD / LD player and DVD recorder controls* on page 38 and *Cable TV / satellite TV / digital TV / TV controls* on page 39 for detailed information on the function of individual buttons.

Resetting all remote control settings

This restores all presets to the factory defaults. See *Using the remote control with other components* on page 36 for the default remote settings.

- **Press RECEIVER and number button '0' (zero) at the same time. Keep them pressed for about 3 seconds.**

The LED on the remote control blinks three times indicating all the preset codes and the Remote Direct setting have been reset to the factory defaults.

VCR / DVD / LD player and DVD recorder controls

This remote control can control these components after entering the proper codes (see *Using the remote control with other components* on page 36).

Note that in addition to the controls listed in this table, there are dedicated controls on the remote for a Pioneer DVD recorder.

Button(s)	Function	Components
⏻ **SOURCE**	Press to switch the components between standby and on.	*All*
I◄◄	Press to return to the start of the current track or chapter.	*All*
►►I	Press to advance to the next track or chapter. Repeated presses skips to the start of the following tracks or chapters.	*All*
❚❚	Press to pause playback or recording.	*All*
►►	Hold down for fast-forward playback.	*All*
◄◄	Hold down for fast-reverse playback.	*All*
►	Press to start playback.	*All*
■	Press to stop playback (on some models, pressing this when the disc is already stopped will cause the disc tray to open).	*All*
ENTER/TIMER REC	Use as **ENTER**.	DVD
	Press after keying a channel number.	VCR
	Press to display timer recording screen.	DVD recorder (PIONEER 466, 467, 468)
	Press to display Disc Navigator screen.	DVD recorder PIONEER 456
	Press to switch sides of a disc.	LD
+10 •/CLEAR	Use as **+10** button when entering numbers.	LD
	Press to clear a numeric entry.	DVD / DVD recorder
Number buttons	Use to directly access tracks, etc. on a program source *Method 1:* For numbers 1–9, use the number buttons. For numbers 10 and over, use the **+10** button, e.g., **+10**, **+10**, **3** for 23. *Method 2:* Use the number buttons followed by **ENTER**, e.g., **2**, **3**, **ENTER** for 23.	*All*
REC ● & ►	Press together to start recording.	VCR
DISC NAVIGATOR	Press to display top menu.	DVD / LD
	Press to display Disc Navigator screen.	DVD recorder (PIONEER 466, 467, 468)
MENU	Press to display on-screen menu.	*All*
RETURN	Press to go back to the previous menu page.	DVD / DVD recorder
AUDIO	Press to change the audio track of discs with more than one audio track.	DVD / LD / DVD recorder
	Press to change TV/VCR.	VCR
↑↓←→ , ENTER	Use to navigate on-screen menus.	*All*
CHANNEL +/–	Use to select channels.	LD / VCR / DVD recorder

Cable TV / satellite TV / digital TV / TV controls

This remote can control these components after entering the proper codes or teaching the receiver the commands (see *Using the remote control with other components* on page 36).

Button(s)	Function	Components
TV ⏻	Press to switch between standby and on.	*All*
INPUT SELECT	Press to switch the TV input.	TV
CHANNEL +/–	Use to select channels/pages.	*All*
VOLUME +/–	Use to adjust the TV volume.	TV
VOLUME – & **ENTER**	Press together to mute the Pioneer TV volume.	TV (Pioneer)
MENU	Press to display menu screen.	*All*
DISC NAVIGATOR	Press to display DTV menu.	DTV
RETURN	Use to go back to the previous menu page.	TV / DTV
	Press to exit menu.	Cable TV / Satellite TV
AUDIO	Use to switch audio channels.	*All*
◄◄	Press to display EPG screen.	TV
	Press to display guide screen.	Cable TV / Satellite TV / DTV
►	Press to switch DTV on/off.	DTV
►►	A	Satellite TV
	Press to display information screen.	DTV
I◄◄	Press to display previous page (Page –).	Cable TV
	B	Satellite TV
	RED	TV
	BLUE	DTV
►►I	Press to display next page (Page +).	Cable TV
	E	Satellite TV / DTV
	CYAN	TV
	YELLOW	DTV
II	C	Satellite TV
	GREEN	TV / DTV
■	D	Satellite TV
	YELLOW	TV
	RED	DTV
ENTER/**TIMER REC**	Use as **ENTER**.	*All*
Number buttons	Use with **ENTER** to input channel numbers. e.g., **2**, **3**, **ENTER** for 23.	*All*
↑↓←→, **ENTER**	Use to navigate on-screen menus.	*All*

Note

- Depending on the maker and individual model, there are some buttons that may not be able operate some equipment or may operate it in a different way.

Preset code list

DVD player

Manufacturer	Code
PIONEER	000, 008, 020
AKAI	007
DENON	010
HITACHI	012
JVC	004
PANASONIC	003
PHILIPS	013
RCA	009, 011
SAMSUNG	005
SHARP	006
SONY	002
SONY (PS2)	016
THOMSON	015
TOSHIBA	001
ZENITH	014

DVD recorder

Manufacturer	Code
PIONEER	456, 466, 467, 468
PANASONIC	465
TOSHIBA	464

LD player

Manufacturer	Code
PIONEER	100, 111(DVD/LD)
DENON	110
HITACHI	109
PHILIPS	104
RADIOLA	104
SONY	101, 102

TV

Manufacturer	Code
PIONEER	600, 651, 231
ALBA	639
BUSH	647
FINLUX	655
FISHER	635, 638
FUJITSU	648
FUNAI	640
GOLDSTAR	650
GRANDIENTE	657
GRUNDIG	631, 653
HITACHI	606, 633, 634, 654
ITT	642
JVC	613
MITSUBISHI	609
NOKIA	632, 652
PANASONIC	608, 622
PHILIPS	607, 656
RCA	618
SALORA	643
SAMSUNG	644, 646
SANYO	645
SEI	649
SHARP	602
SONY	604
TANDY	641
TELEFUNKEN	637
THOMSON	636
TOSHIBA	605

STB (satellite/CATV)

Manufacturer	Code
PIONEER	200, 204, 700
JERROLD	716
SA	706, 708
ZENITH	717

Digital STB

Manufacturer	Code
PIONEER	200, 204

VCR

Manufacturer	Code
PIONEER	400, 443
AIWA	446
AKAI	442
ALBA	447, 452
BAIRD	450
BUSH	448
GOLDSTAR	411
GRADIENTE	441
GRUNDIG	453, 454, 455
HITACHI	406
JVC	407, 428
MAGNAVOX	414
MATSUI	445
MITSUBISHI	609, 424
PANASONIC	408, 432
SANYO	444
SHARP	402
SONY	416, 417, 457, 458, 459 (digital video)
TELEFUNKEN	451
THOMSON	449
TOSHIBA	405

Tuner

Manufacturer	Code
PIONEER	500

Note

- There are cases where only certain functions may be controllable after assigning the proper preset code, or the codes for the manufacturer in the list will not work with the particular model you are using.
- See page 36 for the default preset codes.

English

Chapter 11
Additional information

Troubleshooting

Incorrect operations are often mistaken for trouble and malfunctions. If you think that there is something wrong with this component, check the points below. Sometimes the trouble may lie in another component. Investigate the other components and electrical appliances being used. If the trouble cannot be rectified even after exercising the checks listed below, ask your nearest Pioneer authorized service center or your dealer to carry out repair work.

Symptom	Cause	Remedy
The power does not turn on.	• The power plug is disconnected.	• Connect the power plug to the wall outlet.
	• The protection circuit may have been activated.	• Disconnect the power plug from the outlet, and insert again.
	• Static electricity caused by dry air.	• Disconnect the power plug from the outlet, and insert again.
	• Something is obstructing the rear panel fan.	• Remove the obstruction then press ⏻ **STANDBY/ON** for 10 seconds to switch on.
	• The internal temperature of the unit has become too high.	• Place the unit in a cool, airy place to cool it down, then press ⏻ **STANDBY/ON** for 10 seconds to switch on.
The receiver suddenly switches off.	• The internal temperature of the unit has become too high.	• Allow the unit to cool down in a well ventilated place, then press ⏻ **STANDBY/ON** for 10 seconds to switch on.
	• The thermistor (temperature sensor) is faulty. • The receiver has a serious problem.	• Unplug the receiver from the wall and call a Pioneer-accredited repair center.
AMP ERR is displayed, then the power automatically switches off.	• The receiver has a serious problem.	• Unplug the receiver from the wall and call a Pioneer-accredited repair center. *Do not try to switch the unit on/off again after seeing this message.*
The unit does not respond when the buttons are pressed.	• Improper connections.	• Make sure the component is connected correctly (see page 8).
	• Sound is muted.	• Press **MUTE** on the remote control.
	• The volume is turned down.	• Adjust the **MASTER VOLUME**.
No sound is output when the AM/FM is selected.	• Incorrect frequency.	• Tune in the correct frequency.
	• The antenna is not connected.	• Connect the antenna (see page 15).
Broadcast stations cannot be selected automatically.	• The radio signal is too weak .	• Connect an outdoor antenna (see page 15).
Considerable noise in radio broadcasts.	**FM broadcasts**	
	• The FM antenna is not fully extended or is poorly positioned.	• Fully extend the FM wire antenna, position for best reception, and secure to a wall.
	• Weak radio signals.	• Connect an outdoor FM antenna (see page 15).
	AM broadcasts	
	• The AM antenna is poorly positioned.	• Adjust the direction and position for best reception.
	• Weak radio signals.	• Connect an additional internal or external AM antenna (see page 15).
	• Interference caused by other equipment (fluorescent lamp, motor, etc.).	• Turn off the equipment causing the noise or move it away from the receiver.
		• Place the antenna farther away from the equipment causing the noise.
No sound from surround or center speakers.	• Surround or center speaker settings are incorrect.	• Refer to *Making receiver settings from the System Setup menu* on page 32 to check the speaker settings.
	• The surround and/or center levels are turned down.	• Turn levels up. See *Setting individual channel levels* on page 35 to check the speaker levels.
	• The surround and/or center speakers are disconnected.	• Connect the speakers (see page 13).

Symptom	Cause	Remedy
No sound from subwoofer.	• The subwoofer is disconnected or switched off.	• Connect or switch on the subwoofer (see page 13).
	• The subwoofer's settings are incorrect.	• Set the subwoofer (see page 32).
		• Set the front speakers to Small (**S**) (see page 32).
	• The subwoofer's levels are too low.	• See *Setting individual channel levels* on page 35 to check the speaker levels.
	• The LFE Attenuator is set to **OFF**.	• Set the LFE Attenuator to either **0 dB** or **10 dB** (see page 33).
Noise is output when scanning a DTS CD.	• The scan function performed by the player slightly alters the digital information, making it unreadable.	• This is not a malfunction, but be sure to turn the volume down to prevent the output of loud noise from your speakers.
The Dolby/DTS indicator doesn't light when playing Dolby/DTS software.	• The player is paused.	• Press play.
	• The player's sound output settings are wrong.	• Set the player correctly (consult the manual that came with the player, if necessary).
When playing a 96 kHz/24 bit disc the sound is too loud.	• Different discs have different recording levels so some may be louder than others.	• Turn the volume down.
The sound distorts.	• The analog signal is too strong.	• Turn on input attenuator (see page 33).
	• Master volume is too loud.	• Turn the volume down.
You can only hear treble from speakers.	• The front speakers are set to small (**S**).	• Set the front speakers to large (**L**) (see page 32).
Sound is produced from analog components, but not from digital ones (DVD, LD, CD-ROM etc.).	• Digital connections are incorrect.	• Make digital connections (see page 8)
	• The digital output of the player is turned off.	• Turn on the digital output of the player on (consult the manual that came with the player, if necessary).
	• The CD-ROM player is outputting a data stream (not an audio signal) which is incompatible with this receiver.	• Use a player that is compatible with this receiver.
	• Analog input has been selected.	• Select digital input (see page 30).
	• The digital input assignment is wrong.	• Assign the digital input (see page 33).
No sound is output or a noise is output when Dolby Digital/DTS software is played back.	• A DVD player not compatible with Dolby Digital/DTS is being used.	• Make sure your DVD player is compatible with Dolby Digital/DTS.
	• The settings on the DVD player are incorrect and/or the DTS signal output is turned off.	• Make sure the player's settings are correct and/or the DTS signal out is on. Refer to the instruction manual supplied with the DVD player.
	• The digital output level is turned down on a CD player or other component equipped with digital output level adjustment capability. (The DTS signal has been altered by the player, and cannot be read.)	• Set the digital volume level of the player to full, or to the neutral position.
There is no sound or picture when the DVR is connected between the TV and this receiver.	• The DVR's input selector is not set to this receiver.	• When the DVR is switched on, make sure that it is set to the correct input so that audio/video from the receiver gets passed through to the TV.
The settings have all been cleared.	• The receiver has been unplugged or the main power turned off for more than a month.	• Set the receiver again (see page 32).
No image is output when an input is selected.	• The video connections are incorrect.	• Make sure the video component is connected correctly (see page 12).
	• The input source is not properly selected.	• Make sure the proper component is selected by pressing the correct function button (see page 23).
	• The DVD/video player settings are incorrect.	• Set correctly. Refer to the instruction manual supplied with the DVD/video player.
OVERLOAD blinks in the display and the power turns off automatically.	• The speaker cable is shorting out the unit.	• Make sure there are no loose strands of speaker wire touching the metal casing of the receiver.
	• The output is too high.	• Turn the volume down.
You can't set the subwoofer frequency crossover.	• All the speakers are set to either large (**L**) or — (i.e. no speakers are set to small).	• Change the speaker settings (see page 32).
The display is dark or off.	• The display is set to dark or off.	• Press **RECEIVER** then **DIMMER** on the remote control repeatedly to select a different brightness.
After making an adjustment the display goes off.	• The display is set to off.	• Press **RECEIVER** then **DIMMER** on the remote control repeatedly to select a different brightness.

Symptom	Cause	Remedy
The receiver cannot be remote controlled.	• The remote control batteries have worn out.	• Replace the batteries (see page 3).
	• You are too far away or at a bad angle for operation.	• Operate within 7 m, 30° of the remote sensor on the front panel (see page 21).
	• There is an obstacle between the receiver and the remote control.	• Remove the obstacle or operate from another angle of position.
	• Strong light such as fluorescent light.	• Avoid exposing the remote sensor on the front panel to direct light.
	• The **CONTROL IN** jack has been hooked up.	• Disconnect the **CONTROL IN** jack.
Other components cannot be remote controlled.	• The proper code hasn't been input into the remote control to control that component.	• Input the proper code into the remote control (see page 36).
	• The remote control is in a mode to make some setting or control something on the receiver.	• Press the button of the component you want to control.
	• Something is plugged into the **CONTROL IN** jack (see page 16).	• Either point remote at the remote sensor of the unit that is plugged into the **CONTROL IN** jack or unplug the cable from the **CONTROL IN** jack and use remote normally.
The shutter of the optical terminal doesn't close after removing plug.	• The plug was inserted improperly.	• The terminal is fine but the shutter won't close.
Audio can be heard from an analog input other than the one currently selected.	• One of the SCART cables is not properly connected.	• Re-plug in the SCART cables making sure that they are fully inserted.

Note

- If the unit does not operate normally due to external effects such as static electricity.
- Disconnect the power plug from the outlet and insert again to return to normal operating conditions.

Surround sound formats

Below is a brief description of the main surround sound formats you'll find on DVDs, satellite, cable and terrestrial broadcasts, and video cassettes.

Dolby Digital

You can identify Dolby Digital encoded source by the following logo:

Dolby Digital is a multichannel digital audio coding system widely used for DVD and digital broadcast soundtracks. It can deliver up to six discrete audio channels, comprising five full range channels and a special LFE (low frequency effects) channel used mainly for deep, rumbling sound effects; hence the term "5.1-channel" Dolby Digital.

Dolby Pro Logic II and Dolby Surround

Dolby Pro Logic (and Pro Logic II) is a *decoding* system that can extract four (five for Pro Logic II) channel surround sound (front left/right, center, and surround channels) from any stereo source.

Dolby Surround is an *encoding* system which embeds surround sound information within a stereo soundtrack, which a Dolby Pro Logic decoder can then use for enhanced surround sound.

You can identify a Dolby Surround encoded source by the following logo:

DTS Digital Surround

You can identify a DTS Digital Surround encoded source by the following logo:

DTS Digital Surround is a 5.1-channel audio encoding system from Digital Theater Systems Inc. for DVD soundtracks. Like Dolby Digital, it provides six discrete channels of audio, including an LFE channel.

Specifications

Amplifier section

Continuous Power Output (STEREO mode)

Front. . . . . 40 W + 40 W (DIN 1 kHz, THD 1 %, 8 Ω)

Continuous Power Output (SURROUND mode)

Front. . . . . 50 W/ch (DIN 1 kHz, THD 1 %, 8 Ω)
Center . . . . . 50 W (DIN 1 kHz, THD 1 %, 8 Ω)
Surround . . . . . 50 W/ch (DIN 1 kHz, THD 1 %, 8 Ω)

RMS Power Output

Front. . . . . 75 W/ch (1 kHz, THD 10 %, 6 Ω)
Center . . . . . 75 W (1 kHz, THD 10 %, 6 Ω)
Surround . . . . . 75 W/ch (1 kHz, THD 10 %, 6 Ω)

- Above specifications are applicable when the power supply is 230 V.

Audio section

Input (Sensitivity/Impedance) . . . . . 200 mV/47 kΩ
Output (Level/Impedance)
VIDEO, DVR/TV . . . . . 200 mV/2.2 kΩ

Video section

Input (Sensitivity/Impedance) . . . . . 1 Vp-p/75 Ω
Output (Level/Impedance) . . . . . 1 Vp-p/75 Ω

FM tuner section

Frequency Range . . . . . 87.5 MHz to 108 MHz
Usable Sensitivity . . . . . Mono:15.2 dBf, IHF (1.6 μV/ 75 Ω)
50 dB Quieting Sensitivity. . . . . Mono: 20.2 dBf
Stereo: 41.2 dBf
Signal-to-Noise Ratio . . . . . Mono: 76 dB (at 85 dBf)
Stereo: 72 dB (at 85 dBf)
Signal-to-Noise Ratio (DIN) . . . . . Mono: 62 dB
Stereo: 58 dB
Distortion . . . . . Stereo: 0.6 % (1 kHz)
Alternate Channel Selectivity . . . . . 70 dB (400 kHz)
Stereo Separation . . . . . 40 dB (1 kHz)
Frequency Response. . . . . 30 Hz to 15 kHz (±1 dB)
Antenna Input (DIN) . . . . . 75 Ω unbalanced

AM tuner section

Frequency Range . . . . . 531 kHz to 1,602 kHz (9 kHz step)
Sensitivity (IHF, Loop antenna) . . . . . 350 μV/m
Selectivity . . . . . 30 dB
Signal-to-Noise Ratio . . . . . 50 dB
Antenna . . . . . Loop antenna

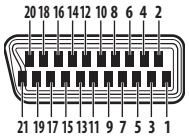
Miscellaneous

Power Requirements
UK model . . . . . AC 230 V, 50/60 Hz
European model . . . . . AC 220 – 230 V, 50/60 Hz
Power Consumption 150W
In standby (AV Direct off) . . . . . 0.4 W
Dimensions . . . . . 420 (W) x 70 (H) x 383 (D) mm
Weight (without package) . . . . . 6.5 kg

Furnished parts

AM loop antenna 1
FM wire antenna 1
Dry cell batteries (AA size IEC R6P) 2
Remote control unit 1
Power cable 1
Speaker cable labels 1
Operating instructions 1
Warranty card 1

SCART pin assignment



Pin	DVD & STB	VIDEO	DVR/TV
1	N.C.	Audio right output	Audio right output
2	Audio right input	Audio right input	Audio right input
3	N.C.	Audio left output	Audio left output
4	Common GND for audio	Common GND for audio	Common GND for audio
5	GND for (7)	GND for (7)	GND for (7)
6	Audio left input	Audio left input	Audio left input
7	Blue input	Blue input	Blue output
8	Status & aspect input	Status & aspect input	Status & aspect output
9	GND for (11)	GND for (11)	GND for (11)
10	N.C.	i/o-Link.A control	i/o-Link.A control
11	Green input	Green input	Green output
12	N.C.	N.C.	N.C.
13	GND for (15)	GND for (15)	GND for (15)
14	GND for (16)	GND for (16)	GND for (16)
15	Red/S-video(C) input	Red/S-video(C) input	Red/S-video(C) output
16	Blanking input	Blanking input	Blanking output
17	GND	GND for (19)	GND for (19)
18	GND for (20)	GND for (20)	GND for (20)
19	N.C.	Video output	Video/S-video(Y) output
20	Video/S-video(Y) input	Video/S-video(Y) input	Video input
21	GND (plug shield)	GND (plug shield)	GND (plug shield)

Note

- Specifications and the design are subject to possible modifications without notice, due to improvements.

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